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Mortgage-Backed Securities Operations & Analytics (MBSOA)

In support of:

The Government National Mortgage Association (Ginnie Mae)

Issued to:

Deloitte Consulting LLP.

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C.1 BACKGROUND

Ginnie Mae's Mortgage-Backed Securities (MBS) programs include Single Family, Multifamily, Manufactured Housing, Home Equity Conversion Mortgages (HECM) and Multiclass securities. These programs help to channel funds from the nation's capital markets into the market. The U.S. Government's full faith and credit guarantee makes MBS securities widely acceptable to capital markets investors which choose to invest in primary mortgages because of the guarantee. Ginnie Mae guarantees the registered holder of the securities the timely payment of scheduled monthly principal and interest payments, loan prepayments and early recoveries of principal on the underlying mortgages. Issuers that receive funds through the sale of MBS securities can use the capital to make additional residential and other types of mortgage loans. Through this process, the MBS program increases the overall supply of credit available for housing and helps to ensure that credit is available at reasonable interest rates.

C.1.1 Purpose

Ginnie Mae requires a Contractor to support the Agency's work to administer its single class and multiclass MBS programs and to ensure the smooth functioning of MBS markets. Ginnie Mae requires services to support its MBS operations; data collection and reporting; application operations, maintenance, and security; risk and information analytics; enhancements, integrated software development and transformation initiative support; and specialized data and risk analysis support needed to run Ginnie Mae's MBS programs.

C.1.2 Agency Mission

Ginnie Mae guarantees that investors in bonds guaranteed by its programs will receive the timely payment of principal and interest. Ginnie Mae is a wholly owned corporate instrumentality of the United States located within the U.S. Department of Housing and Urban Development (HUD). Its powers are prescribed by Title III of the National Housing Act, as amended (12 U.S.C. 1716 et seq.). Through its MBS programs, Ginnie Mae guarantees privately issued securities that are backed by pools of mortgages insured or guaranteed by the Federal Housing Administration (FHA), the Department of Veterans Affairs (VA), Rural Development (RD) of the U.S. Department of Agriculture (USDA), and HUD's Public and Indian Housing program (PIH). If borrowers fail to make timely payments on their mortgages, the Issuer of the MBS must make the timely payments to the registered holders, using the Issuer's own resources.

The Ginnie Mae MBS Program is governed by guaranty agreements entered by Ginnie Mae and Issuers according to the terms of the Mortgage-Backed Securities Guide 5500.3, Rev. 1 (MBS Guide). The MBS Guide is available on Ginnie Mae's website at www.ginniemae.gov. Additional program information is available in *Attachment A: Mortgage-Backed Securities*

Overview. For a list of acronyms see *Attachment B: Acronym Table* in the Appendix.

C.1.3 OBJECTIVES

The objective of this requirement is for Ginnie Mae to acquire a contractor to:

- Support the program participant reporting cycles for the life of all MBS and provide robust MBS data analytics, risk analysis and predictive analytic capabilities to improve Ginnie Mae's data driven decision making ability to effectively manage its MBS portfolio of evolving programs, services and risk profile.
- Support Ginnie Mae in providing a seamless customer experience for its program participants and robust and enhanced data disclosure reporting for its investors while streamlining Ginnie Mae's MBSOA operations and business processes.
- Provide agile, efficient, reliable, flexible, highly available and secure MBSOA applications, systems and business processes to enable Ginnie Mae to quickly respond to MBS market changes with new capabilities, products and improved performance.
- Provide MBS expertise and thought leadership with innovative approaches and solutions to support and expand Ginnie Mae's MBS programs and capabilities to meet program participants needs by working collaboratively with Ginnie Mae and its business partners.

C.2 SCOPE

The scope of the MBSOA work to be performed under this Task Order (TO) is as follows:

- (a) Perform data collection, validation and reporting of the collateral held in Ginnie Mae's MBS programs; MBS data disclosure reporting; MBS regulatory and compliance monitoring and reporting.
- (b) Provide state-of-the-art, innovative, and robust cloud or web-based risk analysis tools and services to effectively manage risk. Perform risk analysis for Ginnie Mae's MBS loan, pools, and securities portfolio across all program types; Issuer analysis of the companies and banks making the loans; analysis of Ginnie Mae's programs and products, and complete new Issuer applications.
- (c) Provide application operations and maintenance (O&M) services, ensuring and maintaining compliance and minor software enhancement services for Ginnie Mae's systems and applications which will be primarily hosted in the Amazon Web Services (AWS) GovCloud environment. This will include establishing and/or maintaining cybersecurity of all platforms supported as per Ginnie Mae and federal security requirements. Systems and applications include cloud and web-based technologies, software applications, databases and related support applications and processes. O&M support includes application and database operations management, application upgrades, application patching, application monitoring, application and software compliance, information assurance and IT security compliance, IT Service Management participation and compliance, reference architecture participation and

compliance, corrective action to production systems from defects (“bug” fixes) as well as changes to accommodate new requirements or minor enhancements to functionality, process improvements, or changes to infrastructure. Provide support for data architecture, analytics, configurations, compliance, operational and technical incident reporting, data, quality assurance, automation, and Ginnie Mae Customer Support / Centralized Service Desk support.

- (d) Provide corrective, adaptive and other major enhancements to existing systems as part of Ginnie Mae’s modernization initiatives. In addition, provide Integrated Software Development and Transformation Initiative support. The Contractor is required to collaborate with Ginnie Mae’s business partners on Integrated Project Teams (IPT) for new software development and Transformation Initiatives such as Next Gen initiatives that will be undertaken by Ginnie Mae’s Software Development - Information Technology Services Multiple Award Blanket Purchase Agreement (BPA) Contractors. This could include requirements development support, technical design support, testing services, integration of the new or enhanced applications with the MBSOA systems, and applications, deployment into the application environment, O&M support, and customer adoption support.
- (e) Provide data support for other Ginnie Mae initiatives such as Valuation Modeling and Modeling Research (VMMR) and Master Subservicer (MSS) data collection.
- (f) Support and comply with Ginnie Mae’s policies and federal regulatory requirements for Information Technology (IT) Systems Security, Disaster Recovery (DR), Continuity of Operations (COOP); Implement and maintain a DR Plan to ensure continuity; Develop and maintain a COOP plan to ensure continuity. Create and maintain records and archives related to MBSOA activities. Ensure all application DR and COOP plans are integrated with the Infrastructure Providers DR and COOP plans.
- (g) Provide Customer Experience (CX) support which includes customer adoption support, program participant training and attending and supporting Ginnie Mae at conferences related to MBSOA activities.
- (h) Provide technical advisory along with special project services, plus testing as well as migration activities services.
- (i) Provide support for audits such as Statement on Standards for Attestation Engagements (SSAE) 18, Type II Service Organization Controls Report (SOC) I and SOC II, Right to Audit, Federal Information Systems Controls Audit Manual (FISCAM), Office of Management and Budget (OMB) Circular A-123 Management's Responsibility for Internal Control (OMB A-123), Office of Inspector General (OIG) audits and other types of reviews or audit support.
- (j) The Contractor must support the use of Ginnie Mae provided collaboration tools to include Microsoft Teams, Zoom, BOX, Adobe Connect, Mural and other potential Government authorized collaboration tools.

C.3 CURRENT ENVIRONMENT

C.3.1 Overview of Integrated Support Systems

Ginnie Mae and its Contractors operate in a highly integrated IT infrastructure and business process environment. Systems, applications, and infrastructure used to support the MBSOA Contractor are hosted primarily in the AWS GovCloud and supported by Ginnie Mae's IT Infrastructure Dedicated Cloud Services (IT IDCS) Contractor, to be referred to in this PWS as the Cloud Application Migration and Operations (CAMO) Contractor. This platform is tightly integrated with systems supported by the CAMO Contractor which includes direct connectivity to the CAMO technology environments. Additionally, the MBSOA systems, data and applications are tightly integrated with platforms and applications supported by Ginnie Mae's MBS Issuance & Bond Administration (MBSIBA) Contractor.

There are also several other Contractors that support additional Ginnie Mae key MBS operations, business applications and technology systems that interface or integrate with the MBSOA applications to include the Ginnie Mae Financial Accounting System (GFAS), Subledger Database (SLDB), VMMR and MSS Contractors. This requires a high degree of integration, collaboration, and coordination between each of Ginnie Mae's business partners to support the overall Ginnie Mae enterprise.

The MBSOA Contractor shall assume application O&M responsibility for all current MBSOA services as part of this TO. The MBSOA Contractor will provide the technical and collaborative skills necessary to operate as part of an integrated team across Ginnie Mae's technology support ecosystems to include multiple contractors as part of IPT.

C.3.1.1 Division of Contractor Responsibilities

The MBSOA Contractor is responsible for application O&M and enhancements for all applications necessary to support the services described in this TO along with the Data Collection and Reporting and Risk and Information Analytic services described in this PWS. (See Section H.3 for a list of the Government Furnished Applications, Source Code and Services).

The MBSIBA Contractor is responsible for the engineering, connectivity to Ginnie Mae's mainframe infrastructure, mainframe hosting, MBSIBA application security, compliance, O&M, integration and enhancements of the systems and applications depicted in the infrastructure architecture for MBSIBA in the Virtual Reading Room (*Attachment M: Virtual Reading Room Instructions*) along with the other services they provide.

AWS GovCloud hosting services for the MBSOA applications are provided by the CAMO Contractor. It shares responsibility with the MBSOA Contractor for the security, and O&M of

the applications. The applications are tightly integrated across both the MBSIBA Contractor as well as the CAMO Contractor with its infrastructure and systems.

Securitization Division of Contractor Responsibilities

MBSIBA Contractor	MBSOA Contractor	CAMO Contractor
<ul style="list-style-type: none"> Pool processing, issuance & delivery. Calculation, collection, and distribution of P&I due security holders. Ongoing Bond Administration. Platinum Trustee & REMIC Information Agent. Engineering, mainframe hosting, security, O&M, and enhancements of IT mainframe infrastructure, systems and applications supporting these services. 	<ul style="list-style-type: none"> Investor Reporting & Disclosures. Ongoing Bond Administration. Risk & Information Analytics. O&M, administration, patching, upgrading, security & enhancements for applications, identity and access management, monitoring, integrated tools, and systems supporting these services. 	<ul style="list-style-type: none"> AWS GovCloud services and supporting infrastructure operations for Ginnie Mae's portable distributed applications which include MBSOA applications / systems and MBSIBA non-mainframe applications / systems. Granting application access for Ginnie Mae applications hosted by the CAMO Contractor.
Shared Responsibility: MBSIBA, MBSOA & CAMO Contractor		
<ul style="list-style-type: none"> Coordination with Ginnie Mae's business partners on integrated projects impacting multiple business partners. Support integrated MBS business processes and data exchange. This work requires high levels of Contractor collaboration. 		

C.3.1.2 Infrastructure Consolidation

Currently, Ginnie Mae's IT and connectivity infrastructure is supported and hosted by three Contractors, the MBSIBA Contractor, the IT Infrastructure Consolidation (ITIC) Provider and the new CAMO Contractor. Ginnie Mae is in the process of migrating all of the Ginnie Mae portable and distributed applications (non-mainframe) and supporting infrastructure operations into the CAMO AWS GovCloud. The migration was completed in October 2022, followed by a 3-month Business Stabilization period. This migration includes all the Ginnie Mae MBSOA

applications and systems currently hosted by the ITIC Provider in addition to the Ginnie Mae MBSIBA portable and distributed applications (non-mainframe) and supporting infrastructure operations currently hosted by the MBSIBA. The MBSIBA mainframe and mainframe infrastructure are not part of the cloud migration effort and will remain in the MBSIBA environment.

If *Optional Task Eight – Testing and Migration Activities* is exercised, the MBSOA Contractor will be required to sustain ongoing production operations during the infrastructure and application migration process and provide technical and operational support for the migration of the MBSOA applications hosted by the ITIC Provider to the CAMO Contractor. The MBSOA Contractor will assist with the migration by providing technical and operational support such as testing of the MBSOA applications, business validation, parallel processing services and ensuring platform stability as part of the migration plan related to the MBSOA application.

C.3.1.3 Hosting

In general, in respect to the Reporting and Feedback System (RFS) modules listed in *Section C.3.2 Descriptions of Applications and Databases*, the front-end .NET or other application code, Oracle databases, Informatica, Business Objects and SAS is hosted on infrastructure provided by the CAMO Contractor. The back end and additional integrations supporting reporting functionality such as additional Oracle databases, Extract, Transform and Load (ETL) Processes, UNIX scripting and Oracle Stored Procedures are hosted at the MBSIBA. MyGinnieMae, the Ginnie Mae Enterprise Portal (GMEP 1.0) and the Secure FTP servers that support RFS are also hosted at the MBSIBA. These applications are expected to be migrated from the MBSIBA hosting to the AWS GovCloud by the date of TO award.

C.3.1.4 Connectivity with Consolidated Cloud Infrastructure

Ginnie Mae, in coordination with the CAMO Contractor and its related providers, will provide connectivity to the CAMO environments via AWS WorkSpaces and other secure remote access services for infrastructure or application administration related activities. The CAMO Contractor and other related providers will provide and support all dedicated connectivity to and within the AWS GovCloud.

C.3.1.5 Troubleshooting

The MBSOA Contractor will primarily work with Ginnie Mae's CAMO Contractor and other Ginnie Mae IT support Contractors as applicable for all IT-related monitoring and troubleshooting activities as well as initiatives. The contractor is responsible for application monitoring for all applications as described in the TO. Coordination and management will be provided by Ginnie Mae as explained in *Task Five – Operations, Maintenance & Minor*

Enhancements.

C.3.2 Description of Applications & Databases

See Task Five – *Operations, Maintenance & Minor Enhancements* Section C.4.5.2 O&M for Applications Used to Provide and Support MBSOA Services. These Ginnie Mae applications perform and support all MBS operations, data collections, reporting, and risk and information analytics tasks in this TO.

C.3.2.1 RFS Front-End & Back-End Hosting

RFS is used to support many MBSOA processes. The following core data reporting RFS applications/modules use the CAMO Contractor for front-end and back-end hosting and integrate with the MBSIBA for access, identity/access management, data, and processing functionalities:

- (a) Contact Management (CM);
- (b) Custodial Account Verification System (CAVS);
- (c) Data Disclosure (DD);
- (d) E-Notification (EN);
- (e) HMBS Reporting and Administration (HRA);
- (f) Independent Public Accounting (IPA);
- (g) Matching and Suspense (MAS);
- (h) Pool Accounting & Exception Feedback (PAEF), Single and multifamily modules;
- (i) RFS Administration (ADMIN);
- (j) Servicemembers' Civil Relief Act (SCRA), and
- (k) Widely Held Fixed Investment Trust (WHFIT).

C.3.2.2 RFS Fully Hosted by The CAMO Contractor

The following other RFS modules, applications and Operational Data Stores are hosted by the CAMO Contractor :

- (a) Corporate Watch (CW);
- (b) Data Analysis and Reporting Tool (DART);
- (c) Ginnie Mae Analytics and Reporting System (GMARS);
- (d) Ginnie Mae Meta Data System (GEMS);
- (e) Ginnie Mae Operational Data Store (GMODS)
- (f) Ginnie Mae Portfolio Analysis Database (GPADS);
- (g) Issuer Operational Performance Profile (IOPP);
- (h) Master Subservicer Operational Reporting (MOR).

In respect to items (a) through (h), above, all the application code, plus back end and reporting functionality such as Informatica, SAP Business Objects (SAP BOBJ), Tableau and databases for these applications, are hosted at the CAMO Contractor.

C.3.2.3 Enterprise Wide Operational Data Store (EWODS)

The Enterprise-Wide Operational Data Store (EWODS) is an Oracle relational database that stores transaction processing data that is sourced from various Ginnie Mae applications. EWODS is the repository of data that is collected and shared across the Ginnie Mae enterprise and multiple contractors.

EWODS supports centralized data collection and feedback for all MBS new Issuer processing, new pool originations, monthly accounting and reporting for Single Family and Multifamily pools, and Multiclass securities. EWODS provides a secure single source for all Ginnie Mae's enterprise data, minimizing redundancy and data synchronization across disparate systems. This repository stores data from all Ginnie Mae's Enterprise applications including RFS (maintained by the MBSOA Contractor) and Integrated Pool Management System (IPMS), GinnieNET and the other pool delivery modules (maintained by the MBSIBA Contractor). Data necessary to support the activities performed by the MBSOA will be sourced from or loaded into EWODS and often shared across various database tables and other data repositories.

C.3.2.4 Informatica

Informatica is used to manage the transfer of data across Ginnie Mae's environments. Installations of Informatica will be hosted by the CAMO Contractor and operated and maintained by the MBSIBA Contractor and interact with applications and databases utilized by the MBSOA Contractor. Installations of Informatica are hosted at Ginnie Mae's CAMO Contractor and are operated and maintained by the MBSOA Contractor in support of MBSOA operations. Additional installations of Informatica are hosted at Ginnie Mae's CAMO Contractor, interact with applications and databases utilized by the GFAS Contractor, and are operated and maintained by the MBSOA Contractor. Informatica Dynamic Data Masking is hosted at Ginnie Mae's CAMO Contractor and is utilized for creating and or masking data. Informatica Dynamic Data Masking is operated and maintained by the MBSOA Contractor.

C.3.2.5 SAP Business Objects (SAP BOBJ)

SAP BOBJ is used to support both MBSIBA and MBSOA applications. BOBJ supports the MBSOA's RFS PAEF and other software such as IOPP, MOR and DART as well as other applications. BOBJ supports the MBSIBA's IPMS. The CAMO Contractor will provide the hosting services and infrastructure supporting BOBJ. The MBSIBA Contractor operates and maintains installations of BOBJ that support functionality performed by the MBSOA Contractor, for example, populating various EWODS tables and transferring other data necessary to support

the MBSOA. There are additional installations of BOBJ at Ginnie Mae's CAMO Contractor used to support RFS application modules and are operated and maintained by the MBSOA contractor.

C.3.2.6 Ginnie Mae Meta Data System (GEMS)

GEMS provides a dynamic view of applications' metadata, including the original source of data elements, the business rules applied to a data element, and the latest refresh date of each data element. Ginnie Mae uses the tool to capture the results of data integration routine activity and outputs, affording Ginnie Mae the ability to leverage the tool's functionality in certifying mission critical data.

C.3.3 Ginnie Mae Definitions & Terminology

The ever-evolving nature of capital financial markets requires Ginnie Mae to continuously adapt, update, and change its internal work requirements, processes, and procedures. As markets evolve, Ginnie Mae must undertake minor and major changes in order to continue operating in the market. The following definitions and terms are used throughout this TO to define the types of services Ginnie Mae uses for flexibility in responding to market changes. Often, because markets respond to changes in political and economic trends, it is difficult for Ginnie Mae to predict the types of adaptations it will need to make over the next two years.

C.3.3.1 Continuous Improvements - Minor and Major Enhancements

(a) Continuous Improvements

Ginnie Mae must implement continuous business, process, system, and application improvements in a cost-effective manner. Ginnie Mae proactively seeks improvements to save money, to improve performance, or for any other purpose which presents a service advantage to Ginnie Mae. The Government seeks improvements to the services, features, or other requirements in this TO. Both the Government and the Contractor may propose and, when necessary, develop any type of improvements related to this TO. To implement improvements in a cost-effective manner, all improvements are divided between Minor Enhancements and Major Enhancements based on the number of labor hours each requires.

(b) Minor Enhancements - Improvements Requiring Less Than 500 Hours

A Minor Enhancement is defined as any business, process, service, or technology improvement that will take the Contractor less than 500 labor hours to implement. All Minor Enhancements are covered under *Section C.4.5 Task Five – Operations, Maintenance & Minor Enhancements* as Firm Fixed Priced (FFP) services required by this TO. On average, Ginnie Mae undertakes six (6) Minor Enhancements to applications per month, not to exceed 25 per quarter. The Contractor

shall submit an Estimation of Effort and scope to the Government Technical Point of Contact (TPOC). The TPOC and the Contractor shall mutually agree to whether each initiative will be performed as an enhancement of less than 500 hours or greater than 500 hours. Multiple minor enhancements less than 500 hours shall not be bundled to exceed the 500-hour threshold. In the event of a dispute, the issue shall be submitted to the Contracting Officer for a determination.

(c) Major Enhancements - Corrective, Adaptive and other Improvements Requiring Greater than 500 Hours

A Major Enhancement is defined as any business, process, service, or technology improvement; including corrective, adaptive and other technology improvements; which will take the Contractor more than 500 labor hours to develop and implement. The Government recognizes that the Contractor may need additional staffing or expertise to develop and implement Major Enhancements. All Major Enhancements are covered under *Section C.4.7 Task Seven – Enhancements, Integrated Software Development and Transformation Initiatives Support*. Although the volume may be driven by unforeseen circumstances, the Government estimates that it will undertake twelve (12) to sixteen (16) Major Enhancements per year under the MBSOA TO through the use of TGM by approval of the GSA CO.

C.3.3.2 Technical Advisory Services versus Specialized Analytics, Consultation, and Project Support Work

(a) Technical Advisory Requests

- (1) Technical advisory services are defined as simple requests, queries, reporting, and research work the Contractor performs as part of the regular operations and reporting requirements of this TO. The Contractor can perform this work without adding to existing staff. The information the Contractor needs to complete this work is available in the public domain or in the existing systems and applications the Contractor regularly uses to fulfill the TO requirements. Some of this work will be to pull historical information from applications. To complete this work, the Contractor does not need to undertake project development activities or receive a detailed project description from the Government. In most cases, the timing of this work is flexible, and the Contractor and the Government can mutually agree upon the delivery. All technical advisory work is covered under the relevant FFP services required by this TO.

(b) Specialized Analytics, Consultation, and Project Support

- (1) Specialized Analytics, Consultation, and Project Support services are defined as more complex services that require specialized subject matter expertise, expert advice, or unique information to complete this work. Although the volume may be driven by unforeseen circumstances, the Government estimates that it will undertake ten (10) to fourteen (14) projects each year under *Section C.4.10 Task Ten - Specialized Analytics*,

Consultation, and Project Support of varying size and complexity.

- (i) Specialized Subject Matter Expertise: A person or entity that is an authority in a particular area or topic. For example, Ginnie Mae may need a subject matter expert with in-depth knowledge of the MBS securities market.
- (ii) Expert Advice: Advice or guidance based on experience and technical knowledge of Ginnie Mae's programs, applications, policies, processes, and procedures.
- (iii) Unique Information: External information that is not provided through Ginnie Mae's data feeds, internal applications, or systems. For example, in-depth mathematical, modeling, market research, and sector analysis all require unique information.

(2) The Contractor may need to access outside resources, information, or expertise to complete the Specialized Projects. The Contractor may also need to undertake project development activities and or receive a detailed project description from Ginnie Mae. All work performed under Specialized Projects is covered under *Section C.4.10 Task Ten - Specialized Analytics, Consultation, and Project Support*. Ginnie Mae will provide the Contractor with guidance on the performance of the Specialized Projects. Such guidance will not be of a nature which:

- (i) Causes the Contractor to perform new work outside the PWS or specifications of the TO;
- (ii) Constitutes a change as defined in Federal Acquisition Regulation (FAR) 52.212-4(c) Contract Terms and Conditions - Commercial Products and Commercial Services;
- (iii) Causes an increase or decrease in the cost of the TO;
- (iv) Alters the period of performance or delivery dates; or
- (v) Changes any of the other express terms or conditions of the TO.

C.3.3.3 Document Support

Document support is defined as the documentation that supports the running, improving, and training for all services required by this TO. The Contractor is required to document, update, and provide the Standard Operating Procedures (SOPs), user manuals, reference materials, application related documents, diagrams, all security / Security Assessment and Authorization (SA&A) documentation related to the MBSOA applications, presentations, or online help for the services covered by this TO based on the frequency noted in the *Section F – Deliverables or Performance*. All document support activities are covered under the relevant FFP services required by this TO. While performing minor enhancements, the Contractor shall review relevant systems, operational and other documentation, and update on a quarterly basis.

C.3.3.4 Reporting

Ginnie Mae has three (3) tiers of reports: 1) automated system generated reports; 2) core reports; and 3) customized, specific reports that Ginnie Mae requests. For automated reports, each respective application produces reports that are relevant to the nature of the action being performed in that application. Ginnie Mae expects the Contractor to produce automated reports based on the business operations and processes articulated in the operations manuals. The core reports are part of the normal business functions and are listed in *Section F Deliveries or Performance*. For customized, specific reports, see *Attachment I: MBSOA Risk and Information Analytics Reports*.

C.4 TASK OVERVIEW

Task 1 – Transition In/Out Services

Subtask 1A – Enhancements During Transition (Optional)

Task 2 – Program Management Core Responsibilities

Task 3 – Data Collection and Reporting

Task 4 – Risk and Information Analytics

Task 5 – Operations, Maintenance & Minor Enhancements

Task 6 – Systems Security Requirements

Task 7 – Enhancements, Integrated Software Development & Transformation Initiative Support (Optional)

Task 8 – Testing and Migration Activities (Optional)

Task 9 – CX: Customer Adoption, Trainings & Conferences (Optional)

Task 10 – Specialized Analytics, Consultation, and Project Support (Optional)

Task 11 – SSAE 18 Type II SOC 1

Subtask 11A - SSAE 18 Type II - SOC 2 (Optional)

C.4.1 TASK ONE – TRANSITION-IN/OUT SERVICES

C.4.1.1 Transition-In

The Contractor must perform all necessary steps to transition-in services under this task order.

The Contractor must ensure that there will be minimum service disruption to vital Government business operations and no service degradation during and after transition. All transition-in activities will be completed within six (6) months after the start date of the task order. Transition activities consist of the program management, coordination, and execution of all activities necessary to provide uninterrupted and continuing MBSOA services to including the following:

- (a) Participate in planning sessions with Ginnie Mae and the outgoing prior Contractor to and provide updates to its transition plan(s) to address any specific changes because of these discussions.
- (b) Observe or “shadow” the incumbent Contractor during the initial transition-in of the

transition period to gain experience and familiarization with the tasks. The out-going Contractor will then reverse-shadow the new Contractor during the last portion of the transition-in period to observe and ensure the new Contractor has gained the experience and familiarization with completing the tasks to ensure an understanding of the technical and functional procedures performed under this TO.

- (c) Complete an inventory of all systems and database documentation, user manuals, operations manuals including processes and procedures used by the incumbent Contractor to accomplish operations, as well as an inventory of all transferable application source code/documentation, operational data, and network/systems within 45 calendar days after task order start. Report any potential gaps to Ginnie Mae so that any deficiencies can be addressed prior to completion of the transition period.
- (d) Work with Ginnie Mae to develop a plan for the delivery of reports and deliverables for this TO.
- (e) Coordinate with the incumbent MBSOA Contractor to complete the necessary forms for Ginnie Mae to grant the new Contractor the applicable access rights/permissions and User IDs to the systems, related applications, and servers needed to support the requirements and tasks in this TO. This also includes obtaining permissions related to RFS EWODS and IPMS EWODS which requires coordination with Ginnie Mae and MBSIBA Contractor as they control some of the permissions.
- (f) Transition all production and operations information and procedures used by the incumbent Contractor to accomplish operations and all tasks in this TO. This includes but is not limited to all policies, Standard Operating Procedures (SOPs), operational procedures and protocols; IT security procedures; IT utility operations (Informatica/BOBJ); jobs; programs; queries; files; control documents for tracking, managing, and running all monthly/quarterly production jobs and control counts; detailed logic for all business rules, edit logic, database layouts, table structure, designs, stored procedure logic and utilities that are used by the incumbent Contractor database administrators (DBAs), system administrators and operations staff.
- (g) Transition all reports, procedures/utilities, supplemental programs, files, special queries used by incumbent Contractors DBAs and system administrators, and other items that are supplemental to the RFS modules including MyGinnieMae.
- (h) Transition all responsibilities as documented in the Infrastructure and Application RACI (Responsible, Accountable, Consulted, Informed) Matrix.
- (i) Establish an account at Iron Mountain. (Hard copy documents are currently stored by the incumbent MBSOA Contractor at Iron Mountain.). Coordinate with Ginnie Mae and the incumbent MBSOA Contractor to inventory and transition all documents and records, including the incumbent MBSOA Contractor's hard and soft copy documents, electronic records repository, plus on-site and off-site records storage.
- (j) Coordinate with Ginnie Mae and the incumbent MBSOA Contractor to transfer to the new

MBSOA Contractor any data subscriptions or software licenses that may be necessary to perform the activities set forth in this TO.

- (k) Provide Ginnie Mae with any documentation support needed during the transition-in period.
- (l) All activities are required to be transitioned in a manner considering a prudent balance between timeliness, cost efficiency and ensuring that all monthly core processes, schedules, application uptimes and performance measures are maintained as well as met.
- (m) The Contractor is encouraged to suggest innovative solutions taking into consideration its organizational capabilities and experience while aligning these capabilities with Ginnie Mae's requirements to execute a timely and cost-effective transition.

C.4.1.1.1 Transition-In Plan

The Contractor must develop a Transition-In Plan that describes all activities necessary to ensure continuity of operations and the maintenance of service levels from award until operational responsibility is completely assumed. The Contractor must provide a Draft Transition-In Plan to the Government thirty (30) calendar days after task order project start. The Contractor's Transition-In Plan shall describe the technical approach, organizational resources, and management controls to be employed to meet the cost, performance, and schedule requirements to transition-in the services required by the TO. The Contractor must provide the Final Transition-In Plan within ten (10) workdays of receiving Ginnie Mae's comments on the draft plan. The Plan shall include a Work Breakdown Structure (WBS) in Microsoft Project format addressing schedule and work products. The Contractor must include in their Transition-In Plan a solution that adheres to all Government and industry standards as it directly relates to this requirement. The Contractor must provide periodic progress reviews to the TPOC with dates and frequency approved in the final Transition-In Plan.

The Transition-In Plan shall include:

- (a) The technical approach;
- (b) Planned transition activities;
- (c) Transition activity timelines and milestones;
- (d) Transition resource requirements;
- (e) Transition security requirements;
- (f) Transition risks and mitigation or avoidance strategies;
- (g) Transition communication plan; and
- (h) Staff training.

C.4.1.1.2 Transition-In Completion

The Contractor must provide a certification of readiness and documentation to support and demonstrate a full and accurate transition-in completion. The certification of readiness is an

attestation by the Contractor that they have completed all Transition-In activities necessary to ensure continuity of operations and the maintenance of service levels. This includes the successful completion of reverse shadowing, transition of documentation and related from the incumbent Contractor and that all Contractor personnel are on-board to perform the TOR tasks.

C.4.1.1.3 Security Assessment and Authorization (SA&A) Activities

In order to authorize application operations, Ginnie Mae must complete an accredited Security Assessment and Authorization (SA&A) process. Ginnie Mae will ensure the MBSOA systems, applications, and systems environment have the proper Authority To Operate (ATO) in place at the award of this task order. Following the TO award, it will be the responsibility of the MBSOA Contractor to maintain the ATO and meet the following requirements within the first six (6) months after the task order start date.

- (a) The Contractor must provide a qualified Information Systems Security Officer (ISSO) and a Security Engineer to support Ginnie Mae's SA&A activities.
- (b) All SA&A requirements must be completed by the Contractor and confirmed by Ginnie Mae.
- (c) The Contractor must perform a successful semi-annual Disaster Recovery test that is scheduled during a timeframe defined by Ginnie Mae. The contractor must also provide Ginnie Mae with Disaster Recovery test reporting.
- (d) The Contractor must incorporate into its Transition-In Plan commercial best practices, NIST security and other relevant security requirements noted in *Section C.4.6 Task Six – System Security Requirements*.
- (e) The Contractor will coordinate with Ginnie Mae and its other Contractors, (including the MBSIBA Contractor and the CAMO Contractor) as an active participant in any semi-annual DR tests that occur during the transition-in period. See *Sections C.4.5.4 Disaster Recovery and C.4.5.5 Continuity of Operations* under Task Five.

C.4.1.1.4 SUBTASK 1A - Enhancement Work During Transition-In (Optional) (Estimated 9,240 hours)

The Government expects that most business application development, or enhancements, or business process enhancements being performed by the previous MBSOA Contractor will be completed prior to the completion of the transition-in/out period.

- (a) Ginnie Mae anticipates that minimal enhancement work will be transitioned from the existing MBSOA Contractor to the new MBSOA Contractor. In the event that any development or enhancement work needs to be transitioned, Ginnie Mae will establish a stopping point on this in-progress work with the MBSOA Contractor. Ginnie Mae will coordinate with the MBSOA Contractor how and when to resume the in-progress work. Ginnie Mae will provide the MBSOA Contractor with all necessary transition code and

documentation.

- (b) In the event Ginnie Mae needs to transition any development or enhancement work, the MBSOA Contractor will provide the necessary resources and expertise to transition any work in progress; which will be included in the Transition-in Plan it develops after the TO award. The staffing plan should address the number and types of skills available to execute the transition.

C.4.1.2 Transition-Out

The Contractor must develop, maintain, and implement a Transition-Out Plan. Transition-out activities consist of the coordination and execution of all activities necessary to transition MBSOA services to a successor Contractor. The Transition-out will be performed concurrently during the TO performance period (option year or subsequent extensions) and shall occur over a period not to exceed six (6) months. The transition out period may occur at the end of any performance period. On-going MBSOA services are performed under the respective CLINS, and Transition-out services represent those additional services necessary to execute the transition.

The transition-out objectives are to assist Ginnie Mae in the transition to any future solicitation(s) or restructuring of future services, to ensure the successful transition of all activities to the incoming contractor and to make every reasonable effort to ensure that there is no interruption in critical services during the transition-out period.

The Contractor must provide Transition-Out support including:

- (a) Coordinate and cooperate with Ginnie Mae and incoming Contractor and provide all reasonable assistance to ensure a successful transition.
- (b) Provide full access to its facilities and personnel to enable Ginnie Mae and incoming contractor to observe the performance of Contractor's day-to-day activities necessary to perform under the TO.
- (c) Ensure that activities performed under the TO have been adequately documented and provide copies in electronic and/or hard copy format to Ginnie Mae.
- (d) Update and provide to Ginnie Mae electronic and hard-copy documentation including but not limited to process flows, network diagrams, systems documentation, policies, and procedures necessary to perform activities under the TO.
- (e) Establish and maintain effective communication with the incoming Contractor and Government personnel for the period of the transition via weekly status meetings or as often as necessary to ensure a seamless transition-out.
- (f) Perform the applicable tasks as outlined in *Section C.4.1.1 Transition-In Services* applicable to a Transition-Out from the incumbent Contractor to the incoming Contractor/Government personnel.

C.4.1.2.1 Transition-Out Plan

The Transition-Out Plan must facilitate the accomplishment of a seamless transition from the incumbent Contractor to the incoming Contractor/Government personnel at the expiration of the task order.

The Contractor must:

- (a) Provide a comprehensive draft Transition-Out Plan two months prior to the end of the base year. Ginnie Mae will work with the Contractor to finalize the Transition-Out Plan. The Contractor shall provide the final Transition-Out plan within 10 workdays of receiving Ginnie Mae's comments on the draft plan.
- (b) The Transition-Out Plan must identify how the Contractor will coordinate with the incoming contractor and/or Ginnie Mae to transfer knowledge about:
 - (1) Program and project management processes;
 - (2) All applicable Points of contact;
 - (3) Location and inventory of technical and project management documentation;
 - (4) Status of ongoing technical and operational initiatives;
 - (5) Appropriate Contractor to Contractor coordination to ensure a seamless transition;
 - (6) Transition of Key Personnel knowledge;
 - (7) Schedules and milestones; and
 - (8) Actions required of the Government.
- (c) In the Transition-Out Plan, the Contractor must acknowledge that material and information that was 'transitioned-in' to the Contractor after receiving the TO award. The Contractor must also acknowledge the materials and information it obtained and paid for under the performance of this TO. Both sets of information must be transitioned-out to Ginnie Mae and future contractors. The plan must clearly identify any activities or restrictions in respect to cooperation or knowledge asserted to be proprietary to the Contractor.
- (d) The Transition-Out Plan must include a detailed project plan that identifies how all the MBSOA applications, and all supporting data, documentation and business processes will be migrated to a new vendor. This includes identification and transfer of all SOPs and any historical documents.
- (e) Detail all specific tasks and systems, by functional area, that need to be transitioned and their expected completion dates.
- (f) At a minimum, the Transition-Out Plan must be reviewed and updated on an annual basis; and updated quarterly during the final Option Period.
- (g) The Contractor must implement its Transition-Out Plan NLT six (6) months prior to expiration of the task order. The transition-out period may occur at the end of any performance period.

C.4.2 TASK TWO – PROGRAM MANAGEMENT CORE RESPONSIBILITIES *(Estimated 4,142 hours per year)*

C.4.2.1 Post Award Orientation (Kickoff Conference)

- (a) The Contractor will make themselves available to participate in the Post Award orientation via teleconference within 10 workdays after award. The post award orientation will be scheduled by the GSA Project Manager (PM) within five (5) workdays after TO award. The meeting will provide an introduction between the Government and Contractor personnel who will be involved for the duration of the TO. The meeting will provide the opportunity to discuss technical, management, security, and staffing issues. Additionally, the meeting will provide details on reporting and deliverables requirements, submissions, and the invoicing process. At a minimum, the attendees will include representatives the Contractor deems necessary to participate, e.g., Contracts Manager, TO Project Manager, Finance Representative, and others that would be coordinating with the government contracting and program staff. At least one (1) workday prior to the orientation, the contractor is required to provide an organizational chart of the team, listing of anticipated attendees, as well as any presentation that will be delivered during the orientation to include the following topics:
- (1) Draft Transition-In Plan;
 - (2) Draft Program Management Plan;
 - (3) Draft Baseline Quality Control Plan (QCP);
 - (4) Draft Communications Plan;
 - (5) Points of Contact (POC) for all parties;
 - (6) Staffing Plan and status;
 - (7) Personnel discussion (i.e., roles and responsibilities and lines of communication between Contractor and Government);
 - (8) Security discussion and requirements (i.e., building access, badges, Common Access Cards (CACs)); and
 - (9) Invoicing considerations.
- (b) Within five (5) days of the Post Award orientation, the Contractor will provide the meeting minutes documenting the discussion and capturing any action items.

C.4.2.2 Program Management Support

The Contractor must provide program management support under this TO. This includes the management and oversight of all activities performed by Contractor personnel, including subcontractors, to satisfy the requirements identified in this TO. The Contractor must identify a Program Manager by name who will provide management, direction, administration, quality control, and leadership of the execution of this TO, and direct management over all sub-contractors, service providers and services supporting this effort.

C.4.2.3 Enterprise Level Guidance, Deliveries & Continuous Process Improvements

The Contractor must provide Ginnie Mae strategic enterprise-level guidance that integrates support across all task areas and ensure support is in accordance with TO requirements. The Contractor shall provide all deliveries in accordance with *Section F - Deliverables or Performance*. To support Ginnie Mae's need to drive continuous improvements, the Contractor shall suggest continuous process improvements in respect to all aspects of the TO including minor enhancements.

C.4.2.4 Program Management Plan

The Contractor must document all support requirements in a Program Management Plan (PMP). The PMP outlines the Contractor's approach to program management, risk management, and communications for all tasks and deliverables included in the PWS. The Contractor shall provide Ginnie Mae with a draft PMP 10 workdays after the project start date. Ginnie Mae will make comments on the draft within 15 workdays. The Contractor shall incorporate these comments into the final PMP and return it to Ginnie Mae within 10 workdays of receiving Ginnie Mae's comments. The PMP must be updated annually, at a minimum. The Contractor must work from the latest Government-approved version of the PMP.

The PMP must:

- (a) Describe the proposed management approach for overall program and TO governance and the program governance for each functional area of responsibility.
- (b) Provide a detailed schedule for all milestones, tasks, subtasks, and deliverables required in this TO.
- (c) Describe in detail the Contractor's approach to risk management under this TO and adherence to Ginnie Mae's governance policies and procedures.
- (d) Describe in detail the Contractor's approach to communications, including processes, procedures, communication approach, and other rules of engagement between the Contractor and the Government.
- (e) Include the Contractor's Baseline QCP.

C.4.2.5 Communications

The Contractor must facilitate Government and Contractor communications by:

- (a) Effectively track and document TO requirement and activities using industry best standards and proven methodologies.
- (b) Allowing for continuous monitoring and evaluation by the Government;
- (c) Ensuring all support and requirements performed are accomplished in the TO.
- (d) Notifying the COR and TPOC of any problems encountered throughout the TO period of

performance (PoP).

- (e) Communications Plan: Create and provide a Communications Plan that will be used to manage the portfolio of work defined in this TO and contain regular updates on an agreed subset of CLINs. Submit the Final Communications Plan to the TPOC within ten (10) workdays of receiving Ginnie Mae's comments. All communications will be managed by the TPOC.
- (f) Communications Action Matrix: Create and provide a Communications Action Matrix that will be used to define details regarding the communications activities that are to be used to manage the work outlined in this TO.
 - (1) The matrix shall be developed and maintained by the Contractor's PM or the PM's team.
 - (2) The matrix shall designate the owners responsible for each task and subtask. Include name, email, and phone number.
 - (3) Submit the matrix to the TPOC within 10 workdays of receiving Ginnie Mae's comments.
 - (4) The matrix shall be updated quarterly and provided to the Government.

C.4.2.6 Risk Management Plan

The Contractor must establish and maintain a Risk Management Plan to include a comprehensive Issue/Risk Log to track risks and assign mitigation strategies. Risks are potential future events that, if they occur, would have an impact on the project/TO whereas issues are events that have occurred and must be resolved as soon as possible. The Contractor shall perform an initial risk assessment jointly with Ginnie Mae and its business partners during the first six (6) months of the project start, identifying and assessing the probability and impact severity of all foreseeable programmatic and technical risks, and developing mitigation strategies for high and medium exposure risks. The Contractor shall maintain and update the Risk Management Plan on an ongoing basis and conduct risk reviews as part of the bi-weekly meeting with TPOC.

The Risk Management Plan must include how risks will be identified, managed, and mitigated. The responsibilities for monitoring and review shall be clearly defined. The monitoring and review processes shall encompass, when applicable, all aspects of the risk management process for the purposes of:

- (a) Ensuring that controls are effective and efficient in both design and operation.
- (b) Obtaining further information to improve risk assessment.
- (c) Analyzing and learning lessons from risk events, including near-misses, changes, trends, successes, and failures.
- (d) Detecting changes in the external and internal context, including changes to risk criteria and to the risks, which may require revision of risk treatments and priorities.
- (e) Identifying emerging risks.

The plan must also include an Issue/Risk Log template that shall be used to track issues and risks and assign mitigation strategies to address each one. The Contractor shall maintain the Issue/Risk Log and update it as needed. The Issue/Risk Log is an ongoing tool for the purposes of identifying, triaging, and managing risks. The Issue/Risk Log shall be monitored by the Contractor at least weekly.

C.4.2.7 Quality Control Plan

The Contractor must ensure that it provides high quality services throughout the life of the TO and that methods for improving the overall quality of the services are employed. The preliminary QCP shall provide an overview of how the Contractor would address the TO's quality requirements, after award.

(a) The Contractor's QCP must include:

- (1) Qualified Personnel: A description of the Contractor's methodology for identifying and recruiting qualified personnel and employee retention.
- (2) Roles and Responsibilities: A description of the individuals responsible for quality control within the TO, along with the authority and responsibilities of everyone.
- (3) Key Risk Areas: A definition of the key risk areas associated with this TO where an event or consequence could occur that would have a negative impact on the Contractor's ability to fulfill its obligations and quality requirements of this TO.
- (4) Management Controls: A description of the Contractor's management control system for assuring the performance of the different organizational resources needed to fulfill the TO.
- (5) Corrective and Preventive Actions: A description of the Contractor's methods for proactive systematic investigation, correction, and prevention to eliminate causes of non-conformities or other undesirable situations on the TO.
- (6) Problem Resolution: An explanation of the Contractor's methodology for resolving problems identified by the Government during reviews conducted in accordance with Ginnie Mae's *Attachment C: Quality Assurance Surveillance Plan*.
- (7) Internal Feedback System: An explanation of the Contractor's methodology for establishing an internal feedback system for support personnel, and for resolving problems identified by that feedback system.
- (8) Quality Validation: A description of how the Contractor will demonstrate and validate that the services or deliveries to be provided under the TO are completed with a level of quality that meets Ginnie Mae's defined performance requirements in *Attachment D: Performance Requirements Summary*.
- (9) Inspection System Description and Reporting: A description of the inspection system to cover all services listed in *Attachment D: Performance Requirement Summary*. Description shall include the areas to be inspected on both a scheduled and unscheduled

basis, frequency of inspections, the title and organizational placement of the inspections, and the reporting approach.

- (10) Method for Identifying and Preventing Quality Defects: A description of the methods to be used for early detection and identification of defects in the quality of service and reporting performed. A description of the prevention methods used with associated controls to prevent quality defects.
- (11) Inspection Records: A description of the records to be kept to document inspections and corrective or preventative actions taken.
- (12) Records Retention: The records of inspection shall be kept and made available to the Government throughout the TO performance period, and for the period after the TO completion until final settlement of any claims under this TO.
- (13) An explanation of the Contractor's approach and procedures for communicating with the Government, handling corrective action without dependence upon Ginnie Mae for direction, as well as identifying and implementing potential improvements to the programs' services and products capabilities.

(b) Submitting the QCP

At TO start, the Contractor must:

- (1) Participate in planning sessions with Ginnie Mae.
- (2) Finalize the QCP based on feedback from Ginnie Mae.
- (3) Submit the QCP to the TPOC for acceptance within 10 workdays of receiving Ginnie Mae's comments.
- (4) The CO will notify the Contractor of acceptance or required changes within 10 workdays of the receipt of the plan.
- (5) Annually, the Contractor shall review the QCP with Ginnie Mae and update the plan.

C.4.2.8 Meetings

The Contractor must schedule and/or attend meetings including:

(a) Monthly Technical Status Meetings:

The Contractor Program Manager must convene a monthly Technical Status Meeting with the TPOC, GSA COR, and other Government stakeholders. The purpose of this meeting is to ensure all stakeholders are informed of the monthly activities, discuss monthly metrics reporting, provide opportunities to identify other activities, establish priorities, and coordinate resolution of identified problems or opportunities. The Contractor Program Manager shall provide minutes of these meetings, including attendance, issues discussed, decisions made, and action items assigned, to the GSA COR and the TPOC within five (5) workdays following the meeting.

(b) Bi-weekly Engagements with TPOC:

The Program Manager will have bi-weekly engagement meetings with the TPOC, including the GSA COR as needed.

C.4.2.9 Monthly Metrics Reporting

The Contractor must provide Ginnie Mae with metrics reporting, by the sixth (6th) workday of the month for the prior months operational and SLA metrics and reporting that covers the Agency's most important functions, processes and procedures including:

(a) Operational Metrics

Operational Metrics must include all information and metrics currently reported on in Ginnie Mae's Monthly Business and Technology Review (BTR) report. This includes but is not limited to the following for the month (in summary and in detail) and year-to-date trends as applicable:

- (1) MBS Issuance by Program and Pool Type
- (2) MBS Active Pool and Loan Packages
- (3) MBS Liquidation Metrics
- (4) Investor Reporting Data File and Data Processing Metrics
- (5) RFS Monthly Reporting Exception Feedback
- (6) Issuer/User Inquires
- (7) Incidents and Outages
- (8) Change Control Metrics (Change Requests and Defects)
- (9) Modernization Projects In-Flight and Production Deployments
- (10) Other Application and Website Metrics

(b) Applicable Contract Performance/Service Level Agreement (SLA) Metrics. These metrics are outlined in Attachment E: MBSOA Performance Requirements Metrics Table. They shall be reported monthly in the Monthly Performance Requirements Metrics Report.

(c) IT Security Reporting must be provided separately as described in *Task Six– Systems Security Requirements*.

(d) Contract Employees and Personal Identity Verification (PIV) Reporting

- (1) Within 10 days of the TO award, the Contractor shall provide the TPOC a list of TO employee names.
- (2) The Contractor shall provide a listing of current TO personnel working on the TO monthly. Any new employees must submit the PIV documentation prior to gaining access to Ginnie Mae systems. See Section I.5 – Contract Clauses HUDAR 2452.237-75 ACCESS TO HUD FACILITIES and HUDAR 2452.239-70 ACCESS to HUD SYSTEMS for more information about the PIV requirements.

C.4.2.10 Content Management Solution

The Contractor must provide and maintain a content management solution, for all MBSOA documentation (including, but not limited to, SOPs, application and system User Manuals, COOP documents, SA&A documents, etc.), TO deliveries and reporting related to this TO that includes these features:

- (a) A centralized system/repository to organize, control and provide secure access to documents.
- (b) A consistent process for managing documents (receiving, organizing, storing, accessing, and archiving) including documented SOPs for using the system.
- (c) Appropriate levels of secure access to protect Personally Identifiable Information (PII) and other sensitive data.
- (d) The ability to share documents and information across Ginnie Mae, contractors and organizations.
- (e) A User Manual that provides Ginnie Mae users with detailed instructions on how to use the system. The Contractor must develop the new Content Management User Manual in consultation with Ginnie Mae. The Contractor will provide the User Manual to Ginnie Mae at a mutually agreed upon date during the first six (6) months of the project start.
- (f) Provide end-user support for Ginnie Mae users accessing the system.
- (g) As directed by the TPOC, the Contractor will migrate its content and deliverables to Ginnie Mae's new content management solution once the new solution is established. Once the new Ginnie Mae content management solution is deployed, the Contractor will be required to utilize it for all content and deliverables.
- (h) Ensure the latest version of the MBSOA documentation (including, but not limited to, SOPs, application and system User Manuals, COOP documents, SA&A documents, etc.), TO deliverables and reporting are included in the Content Management Solution.
- (i) Update all documentation quarterly and perform annual certifications for all documentation (including, but not limited to, SOPs, application and system User Manuals, COOP documents, SA&A documents, etc.), to ensure this information is current. As part of the certification process, provide a report listing the documents that had updates, the key sections updated and why the update was made (minor enhancement, major enhancement, other, etc.). Annual certification shall be performed by June 30th of each year.
- (j) Integration with the Digital Access Management Solution (DAMS) as recommended by Ginnie Mae.

C.4.2.11 Support of Ginnie Mae's Operational Risk Analysis Divisions Examinations and Audits

(a) Overview

The Ginnie Mae Office of Enterprise Risk (OER) is responsible for managing Ginnie Mae's risks. The Operational Risk Analysis Division (ORAD) within OER has been delegated the

authority to oversee the operational and financial, internal controls and risks within the corporation. ORAD accomplishes this goal through Risk and Controls Self-Assessment (RCSA) (operational), OMB A-123 Appendix A (financial) and Vendor Risk Management (VRM) (third party) assessments. The Government understands that some of the Contractor's internal procedures for activities are solely associated with the Contractor's business and may be proprietary. The Government and the Contractor must agree to which specific activities, including all activities, policies and procedures performed by the Contractor and paid for by the Government as part of this task order, shall belong to the Government. A major Ginnie Mae objective is to have access and transparency into the activities performed by the Contractor to understand the interrelationship between the Contractor's activities and Ginnie Mae's because the Contractor performs many essential business activities supporting Ginnie Mae's MBS programs.

(b) Operational, Financial and Third-Party Assessments

The Contractor must allow Ginnie Mae to perform internal control assessments throughout the Contractor's organization as it pertains to the activities the Contractor performs on behalf of Ginnie Mae. These assessments must provide reasonable assurance that the Contractor operations and contract management objectives are being accomplished and that the Contractor's mitigation strategies or controls are effective. These assessments performed by Ginnie Mae, at a minimum, shall allow Ginnie Mae to assess the vendor through the following key activities:

- (1) A comprehensive description of the program with processes, key activities, and accountabilities clearly identified.
- (2) A method for verifying/ensuring effective processes. Third party audits, peer reviews, independent assessments, and external certification may be used.
- (3) Timely notification to the TPOC of significant program changes prior to the changes.
- (4) Rigorous, risk-based, credible self-assessments, and feedback and improvement activities, including utilization of subject matter experts, and other independent reviews to assess and improve the Contractor's work process and to carry out independent risk and vulnerability studies.
- (5) Identification and correction of deficiencies/gaps or operational incidents regarding risk or risk management. Degree of findings will be based on Ginnie Mae's criteria. Ginnie Mae will communicate the results of the assessments with the vendor upon completion of the examination.
- (6) Integration of the program with other management programs including annual internal control reporting.
- (7) Metrics and targets to assess performance, including benchmarking of key functional areas, industry, and research institutions. Assure development of metrics and targets that result in effective performance of risk management and mitigation.

- (8) Continuous feedback and risk management improvement.
- (9) Provide a Corrective Action Plan within 30 calendar days of receiving audit results that responds to each risk identified and provides next steps and deadlines for how the risks will be resolved or mitigated going forward.
- (10) Timely and appropriate communication to Ginnie Mae, including electronic access, of related information.

C.4.3 TASK THREE – DATA COLLECTION & REPORTING

(Estimated 22,228 hours per year)

C.4.3.1 Data Collection and Reporting (Monthly, Quarterly, Annually)

Issuers of Ginnie Mae Mortgage Backed Securities (MBS) submit pool and loan level data monthly. For all single class “forward” MBS programs and all “reverse” Home Equity Conversion MBS (HMBS) programs, monthly pool and loan data is due from Issuers on the 2nd workday of the month. Corrections, if necessary, are due from Issuers no later than the 4th workday. The Contractor must support any future revisions, if any, to these deadlines. Pool level data representing all single class “pools” (or in respect to Multiple Issuer Pools, “loan packages” – hereafter referred to for convenience as pools) are reported along with all of the loan level data associated with each of the pools. All data is required to be submitted electronically by the Issuers and will be processed through the RFS Single Family and Multifamily PAEF modules. The RFS front-end module is accessible within MyGinnieMae and is supported by the Contractor using various back-end databases, stored procedures, UNIX Scripts, Informatica, Business Objects Reports and Tableau dashboards. More detailed information about the data, Issuer obligations, and RFS reporting can be found in the MBS Guide with its Appendices. Information on Ginnie Mae’s key operational metrics and volumes can be found in *Attachment H: Ginnie Mae Profile*.

C.4.3.2 Validate, Process, Analyze, Access, Monitor and Report Data on Pool, Loan and Participation Level Information Received Monthly from Ginnie Mae Issuers, Contractors and Other Parties

The Contractor must:

- (a) Collect, edit, and distribute data on 100 percent of all loan and pool data collected from Issuers.
- (b) Release ending security balances also known as the Remaining Principal Balance (RPB) to the MBSIBA on the 2nd, 4th and if necessary, the 5th workday of each month. If an Issuer fails to report, the Contractor shall calculate and deliver the RPB in coordination and under the direction of Ginnie Mae no later than the 5th workday. Issuers are required to certify as to the accuracy and completeness of the pool, loan, and, if applicable, HMBS participation data reported in RFS using the monthly certification screen within RFS. The current window for

pool and loan data certification is between the 10th and 14th workday. Issuers of certificated Ginnie Mae I pools are required to submit Remittance Advice data to Ginnie Mae by the 8th workday through a direct entry screen in RFS or by using GMEP's file upload function.

- (c) For all monthly reporting and data collection and distribution activities, propose process improvements and upon the direction of Ginnie Mae, implement and provide ongoing support of any activities that improve or shorten the Issuer reporting time cycle. See *Section C.3.3.1 Continuous Improvements - Minor and Major Enhancements*.
- (d) Support Issuers, Ginnie Mae and other participants with the technical and pool and loan level reporting assistance needed to operate RFS and to assure Issuers report accurately and on time.
- (e) Prepare, enhance, and submit timely and accurate reports to Ginnie Mae, and its agents, that reflect the current and historical Issuer and Contractor performance, trends, metrics, and other indicators that relate to the collection of pool and loan level data.
- (f) Submit to Ginnie Mae a monthly summary and supporting reports or documentation.
- (g) Update EWODS with loan level origination data as received from the MBSIBA.
- (h) Process pool and loan level data received electronically from Issuers, as described in Appendix VI-19 of the MBS Guide, RFS Issuer Monthly Reporting of Pool and Loan Data.
- (i) Roll up loan level information to the pool, review and report discrepancies contained in the monthly loan and pool level information and provide monthly processing completion and discrepancy reports. Currently, all critical corrections and discrepancies must be resolved by the 4th workday. Issuers are responsible for addressing all critical exception feedback by the 4th workday.
- (j) Resolve through contact with Issuers or in consultation with Ginnie Mae all significant edit errors prior to the initiation of the processing cycle for the subsequent month. Critical edit errors relating to RPB, or security payment must be resolved by 4th workday.
- (k) During the first five (5) workdays of the month, answer Issuers' emails and phone calls regarding data collection and reporting.
- (l) Prepare monthly feedback reports about Issuers reporting inconsistent information. This includes the production of automated RFS exception feedback reports that the system generates automatically about Issuers that reported inconsistent information.
- (m) Contact Issuers to resolve reporting inconsistencies via phone or email.
- (n) Generate targeted or technical advisory reports as Ginnie Mae may request to support data disclosure or other data quality initiatives. Ginnie Mae averages two (2) to five (5) of this type of technical advisory report per month.
- (o) Report to Ginnie Mae in writing the status of Issuers not reporting, pools not reported, loans not reported and any other problems by the morning of the 3rd and 5th workday. Participate in status discussions telephonically.
- (p) Monitor Issuers progress in certifying the accuracy of RFS pool and loan data. Assist Issuers and provide Ginnie Mae a list of Issuers that have not complied as of the deadline for RFS

data certification.

- (q) Ensure that all errors that impact pool or security balances are resolved prior to the release of the RFS RPB information to the MBSIBA and follow up to ensure that they are resolved in the subsequent reporting cycle.
- (r) On a monthly basis, calculate estimated RPBs for seasoned and new pools and deliver them to the MBSIBA no later than the 25th of each month. A copy of the file is to be delivered to the MBSIBA as a contingency. If for any reason the Security Balance/RPB has not been reported by the Issuer, the Contractor shall, in coordination with Ginnie Mae, deliver the estimated RPBs to the MBSIBA by the 5th workday of the month.
- (s) For Ginnie Mae I certificated pools, the Contractor shall monitor the collection of Issuer submissions of Remittance Advice information. Provide Ginnie Mae a list of Issuers not in compliance with Remittance Advice including the details necessary to connect Issuers to specific securities or certificates. Respond to inquiries on Ginnie Mae I certificate payments to determine if payments were made to the certificate holder. Inquiries on Ginnie Mae I certificate payments average about one per month and will not exceed 12 per year under the FFP. Propose and implement ongoing process improvements and reporting to Ginnie Mae. See *Section C.3.3.1 Continuous Improvements - Minor and Major Enhancements*.
- (t) Collect the Federal Home Loan Bank of Chicago monthly supplemental file by the 10th workday of each month, copy and store to directories on Ginnie Mae's systems and make the current and historical supplemental data available to Ginnie Mae.

C.4.3.3 Reporting of Monthly Operational Activity and Statistics

The Ginnie Mae Office of Securities Operations is responsible for up-to-date status and information about the collection and processing of Ginnie Mae's data. A major objective is to receive insight into progress and a summary of operational data as it is collected.

The Contractor must:

- (a) Deliver monthly operational reports and statistics such as new issuance by program, product, and loan purpose; net change portfolio characteristics month-over-month; monthly flash report as initial data is coming in at the beginning of each month, and liquidations.
- (b) Provide a monthly report on Ginnie Mae issuance volume, broken out by Single Family, Multifamily, HMBS and Manufactured Housing, which may include historical data for comparison on the number of pools, loans, and overall securitization volume.
- (c) Contractor shall demonstrate and deliver incremental improvements and additional reports over the life of the task order. See *Section C.3.3.1 Continuous Improvements - Minor and Major Enhancements*.

C.4.3.4 Collect Multifamily Prepayment Penalty Data and Deliver to the MBSIBA

Some Multifamily MBS have lockout provisions and/or prepayment provisions. These provisions are generally stated in the “Annex – Special Provisions” to the prospectus. If there are no prohibitions against voluntary prepayment, that will also be stated in the prospectus. Multifamily Issuers are required to report the dollar amount and date of any prepayment penalties using the RFS Multifamily Pool Accounting module. Prepayment penalty data is due from the Issuers by the 4th workday. Ginnie Mae’s Multifamily Division reviews the list of pools liquidated each month and verifies a prepayment penalty has been reported based on the Prepayment End Date.

The Contractor must:

- (a) Collect the prepayment information reported by Issuers.
- (b) Verify with Issuers that loans that pay off are accurate and that the liquidation is accounted for properly at the MBS and loan liquidation level.
- (c) Ensure that prepayment penalties have been reported correctly by Issuers on MBS for which a prepayment penalty is due.
- (d) Ensure that prepayment penalties due are included in the RFS “RPB release” to the MBSIBA on the 4th workday of the month.
- (e) Prepare and deliver Multifamily liquidation and prepayment penalty reports to Ginnie Mae each month. This includes manually entering the Lockout End Dates and Prepayment End Dates based on the Mortgage Data screen in the Disclosure Data Search. The first report should be delivered NLT 11:00AM EST on the 3rd workday and the second report NLT 11:30AM EST on the 5th workday of the month.
- (f) Aid Issuers and Ginnie Mae in support of this task.
- (g) Prepare additional and enhanced reports and interfaces for improved Ginnie Mae accessibility, under this fixed-price CLIN.
- (h) Propose, and in coordination with Ginnie Mae, implement process and other improvements. See *Section C.3.3.1 Continuous Improvements - Minor and Major Enhancements*.

C.4.3.5 Guaranty Fee Reconciliation

The Contractor must perform a guaranty fee reconciliation each month comparing the guaranty fee reported by the Issuer to calculations performed by RFS and to the Automated Clearing House (ACH) data used by the MBSIBA to execute the ACH. Identify any over/under payments greater than \$1.00 and follow up with the Issuer and Ginnie Mae to determine if any funds are due to/from the Issuer. Upon receipt of any payment vouchers from Ginnie Mae, update RFS accordingly.

The Contractor must:

- (a) Receive NLT the end of the month from the MBSIBA a record of guaranty fees collected by the ACH and compare this, along with guaranty fees collected by check or fed wire, with the guaranty fee reported by the Issuer to Ginnie Mae.
- (b) Where there is a shortage in the amount of guaranty fee collected over the amount due, instructs the Issuer to contact Ginnie Mae to arrange for payment of the shortage.
- (c) When an overpayment in the guaranty fee occurs, verify the overpayment, and provide Ginnie Mae with the appropriate documentation to refund the overpayment.
- (d) Provide Ginnie Mae a copy of the guaranty fee over/under reports each month.
- (e) Within three (3) months of the close of the Government fiscal year, resolve any outstanding guaranty fee discrepancies and deliver the GYE guaranty over/under report reduced to zero.

C.4.3.6 Assigning Census IDs to Loan Level Records

Ginnie Mae uses Census tract information (Census Tract Codes) associated with each loan record to perform various downstream analysis. It is provided as part of MBS and HMBS data disclosure. The objective is for the Contractor to assign and maintain accurate census tract information to as many loan records as possible. This must be performed upon receipt of the origination Schedule of Pooled Mortgage (11706) data from the MBSIBA and again, not less than monthly, to pick up loans or HMBS participations previously unable to have Census Tract Codes assigned.

The Contractor must:

- (a) Provide updated Census data and integrate the data into the existing suite of processes utilized to update loan records in EWODS.
- (b) Assign Census Tract Codes to new loan originations provided by the MBSIBA monthly; update EWODS loan tables and any flat files such as the origination files used to support GPADS and any other analytical activities.
- (c) Identify loans in the EWODS tables without Census Tract Codes each month, and to the extent possible, assign Census IDs and update the EWODS loan tables.
- (d) Measure the success of assigning Census IDs. Provide reports monthly to Ginnie Mae representing the number and percentage of new loan originations, loans in EWODS not previously coded and Ginnie Mae's loan portfolio.
- (e) For all Census ID activities, propose and in coordination with Ginnie Mae, implement processes and other types of improvements. See *Section C.3.3.1 Continuous Improvements - Minor and Major Enhancements*.

C.4.3.7 Monthly Loan Matching and Suspense

To verify that insurance is in place on each of the loans in Ginnie Mae Pools, the Contractor will

compare loans to data received from FHA, VA, RHS and PIH insurance files to enable Ginnie Mae to determine if insurance is in force. Ginnie Mae will arrange for the provision of the guaranty agency data, which is governed by a Memorandum of Understanding (MOU) / Interagency Agreement (IAA) between Ginnie Mae and each respective agency. The Contractor shall follow the guidance outlined in each respective MOU/IAA. Monthly loan matching of the guaranty agency data to the Issuer loan data is performed by RFS and the loan matching programs. PIH loan matching will be developed in the future.

The Contractor performs the loan matching process monthly on all newly originated loans and again on monthly Issuer reported loan data. When the Contractor “matches” a loan, the case number is “suspended” and any subsequent attempt by the Issuer to change the case number is held pending further due diligence. RFS displays the results using the e-Notification / Exception Feedback functionality which is accessible to Issuers via MyGinnieMae. Issuers are required to resolve discrepancies. This information is used by the Ginnie Mae IOPP application and supports Ginnie Mae’s Issuer and portfolio monitoring processes.

The Contractor must:

- (a) Perform Ginnie Mae’s monthly Loan Matching and Suspense activities following Ginnie Mae’s Loan Matching SOP using Ginnie Mae’s RFS Matching and Suspense (MAS) module.
- (b) Obtain mortgage insurance and guaranty data files from FHA, VA, RD, PIH, and other available sources to match this data on a loan-by-loan basis with loan level data submitted by Issuers.
- (c) Use Ginnie Mae’s RFS MAS module to match loan level data with insurance/guarantee data provided by FHA, VA, RD and PIH to enable Ginnie Mae to determine the number of loans insured or guaranteed. This comparison is done electronically by matching case/loan numbers and other loan information in Ginnie Mae’s RFS against information in FHA, VA, RD and PIH agency data. Job aides also exist to support any required matching exception processes.
- (d) On a monthly basis, display the exceptions results in RFS per the Ginnie Mae Loan Matching SOP so the unmatched data elements results are available to Ginnie Mae and the Issuers. Issuers are required to clear these exceptions per Ginnie Mae guidance. The MBSOA shall assist the Issuers in understanding and resolving exceptions. When changes are made, the Contractor shall make updates to Issuer procedures to clear exceptions and ensure the directions are clear and easily understood.
- (e) Support Ginnie Mae’s Loan Matching SOP and reporting requirements by providing the requisite Tableau Dashboard reports on a monthly or quarterly basis as applicable per the requirements in *Section C.4.4.2 (g) Ginnie Mae Analytics and Reporting System (GMARS)*.
- (f) For all matching and suspense activities, the Contractor shall propose and in coordination with Ginnie Mae, implement process and other improvements. See *Section C.3.3.1*

Continuous Improvements - Minor and Major Enhancements.

- (g) Update SOPs, user manuals, online help, and other related operations documents for any program changes or minor enhancements on an as needed basis.

C.4.3.8 Data Disclosure

Ginnie Mae makes disclosure data and factors available to its investors and data users both at issuance and monthly for its Single Family (SF), Multi Family (MF), HMBS, Real Estate Mortgage Investment Conduit (REMIC) and Platinum programs and products. Ginnie Mae's timely and accurate disclosure of MBS and loan level data is widely used to price and trade Ginnie Mae MBS in the global capital markets. Providing accurate, timely disclosures and a robust delivery platform are major objectives of this TO. Disclosure data is posted to www.ginniemae.gov. The Contractor is responsible, in coordination with the MBSIBA to produce loan, pool, and security level disclosures for all Ginnie Mae products and programs.

Pool level disclosures include SF, MF, HMBS, Platinum and REMIC pools plus factor data. Loan level disclosures include data on new MBS and HMBS loans from pools issued during the previous day or, in the case of the monthly information, during the previous month. The current Data Release Schedule can be found on Ginnie Mae's website at [Data Release Schedule \(ginniemae.gov\)](http://www.ginniemae.gov). A representative data disclosure schedule is as follows in a - c:

(a) SF, HMBS and MF Data Disclosure Schedule

FILE TYPE	SCHEDULED DAY OF MONTH	SCHEDULED TIME
MBS Daily New Issues – (Pool/Security, Pool Supplemental, and Loan Level)	Every Tuesday - Saturday	6:00 AM (SF and MF) 7:00 AM (HMBS)
MBS Monthly New Issues – (Pool/Security, Pool Supplemental, and Loan Level)	1st Workday	6:00 AM (MF) 7:00 AM (HMBS) 10:00 PM (SF)
MBS Portfolio – (Pool /Security, Pool Supplemental, and Loan Level)	6th Workday	6:00 PM (SF, HMBS and MF)
MBS SF Loan Liquidations Monthly	4th Workday	9:30 PM

MF Database	Every Monday - Friday	7:00 AM
Preliminary Multiple Issuer Pools	Every Monday - Friday	9:00 AM
MF Prepayment Penalty and Disclosure Data	6th Workday	7:30 AM
MF Terminated Pools	9th Workday	8:00 AM

(b) Platinum Data Disclosure Schedule

FILE TYPE	SCHEDULED DAY OF MONTH	SCHEDULED TIME
Platinum Daily (Pool/Security, Supplemental)	Every Tuesday - Saturday	6:00 AM (Platinum) 7:00 AM (HMBS Platinum)
Platinum Daily New Issues - Collateral	Every Monday - Friday	6:00 AM
Platinum Portfolio (Enhanced Pool/Security, Enhanced Supplemental, Collateral, HMBS Platinum – Pool Level)	8th Workday	6:00 PM

(c) Factor Files Data Disclosure Schedule

FILE TYPE	SCHEDULED DAY OF MONTH	SCHEDULED TIME
Factor A (Ginnie Mae I and II,	4th Workday	9:30 PM

Platinum, Additional)		
Factor B (Ginnie Mae I and II)	6th Workday	8:00 PM
REMIC 1 Factor	1st Workday before 16th Calendar Day	2:30 AM
REMIC 2 Factor	2nd Workday before 20th Calendar Day	2:00 AM
FRR and SRF History Files	Last Workday	11:00 PM

(d) Disclosure Activities

The Contractor must:

- (1) Ensure that disclosure files conform to the standards in the MBS Guide, file layouts, dictionaries, disclosure minutes, project plans and other related materials. Perform the necessary jobs of scheduling, monitoring, administrative, data quality verification, and documentation functions associated with providing pool and loan level data. This includes monitoring the receipt of the pool level data and coordinating with the MBSIBA in the event there are problems with the transmission or quality of the data.
- (2) Post data to www.ginniemae.gov and distribute to other market participants. The Contractor will make the pool and loan level disclosure data available to market participants and www.ginniemae.gov within five (5) minutes of the disclosure Data Release Schedule posted at www.ginniemae.gov. The Data Release Schedule may be modified from time-to-time as determined by Ginnie Mae.
- (3) Maintain Ginnie Mae's Data Release Schedule at www.ginniemae.gov.
- (4) Perform data quality assurance audit to ensure the data produced by the Contractor and distributed to the global capital market participants is accurate.
- (5) Propose specific process, quality control, and reliability metrics during the first six (6) months of the project start. Implement additional metrics as identified semi-annually. Report quality control metrics to Ginnie Mae monthly.
- (6) Propose and implement enhanced automated monitoring and controls in respect to job completion, accuracy, data completeness, and timely posting of disclosure files to the website.
- (7) Aid Ginnie Mae's staff including any activity necessary to successfully post, transmit,

download files, and support the data search functionality at www.ginniemae.gov. Ensure all deadlines are met per the Data Disclosures schedules above (*Section C.4.3.8 a-c*) including any schedule updates made during the contract period of performance.

- (8) Create documentation to ensure that the process and controls are accurate and auditable within six (6) months of project start. Update this documentation semi-annually.
- (9) Conduct Issuer and Trustee outreach, work with Issuers and Trustees, and coordinate with Ginnie Mae to achieve additional incremental improvements in data quality, including data received from both the Issuers and the MBSIBA. On a quarterly basis, contact an average of 20 Issuers to assess data quality. Assist Issuers to improve their data quality and resolve their data issues.
- (10) Perform Quarterly updates to the Industry Alignment Analyses/Comparisons of Disclosure Data and Files. This analysis reviews Fannie Mae and Freddie Mac's disclosure offerings and compares them against Ginnie Mae's across the SF, MF, Multi-Issuer and Platinum products to determine the extent of gaps or other potential data disclosure improvements opportunities.
- (11) As part of this FFP CLIN, participate in weekly Ginnie Mae Disclosure Working Group meetings, provide minutes, and complete the resulting tasks of an average of eight (8) per week. During non-COVID times, the Contractor historically attends these meetings in person, though it may be possible to also attend these meetings over the phone.

C.4.3.9 Mortgage Electronic Registration (MERS) Reconciliation

The Mortgage Electronic Registration System (MERS) is a database representing information about MERS registered home mortgages. MERS is used by member industry participants to record and track changes in servicing rights and beneficial ownership interests in loans that are registered in MERS. In some cases, MERS is recorded in the land records as the original mortgagee thereby, eliminating or reducing the requirement for additional assignments and recording. Additional information about MERSCORP Holdings, and related entities and services can be found at www.mersinc.org.

Ginnie Mae does not require loans in Ginnie Mae MBS to be registered in MERS. However, if a loan is registered in MERS at the time of pooling, the Issuer should provide the MERS Mortgage Identification Number (MIN) on the Form 11706-Schedule of Pooled Mortgages. Issuers can also update or change a MIN using the "Various" RFS file submission or online RFS entry. This MIN is attached to the loan record and is stored in Ginnie Mae's loan level databases such as EWODS. Over the life of a loan, the servicing may be transferred to an Issuer who is not a MERS member, the loan could be bought out of the Ginnie Mae pool, or the Issuer could decide to de-register the MIN. Over the life of the security, an Issuer could decide to register a loan in MERS that had previously not been registered. Any of these circumstances could result in a discrepancy between Ginnie Mae's records and MERS. Ginnie Mae will arrange for the

MBSOA Contractor to have Ginnie Mae's level of access to MERS Online to perform research and download data and reports. Accurate and timely provision of information about a loan status in MERS is a necessary part of the Issuer Default process and during Ginnie Mae's consideration of a servicing transfer of asset (loan) sale.

The Contractor must:

- (a) Review the weekly MERS Transfer of Servicing Rights (TOS) report. Compare the TOS report to Ginnie Mae's data and release updates to MERS to align with Ginnie Mae's records. Resolve exceptions by communicating with Ginnie Mae.
- (b) Update EWODS with MINS to the extent that it is provided on the origination records provided by the MBSIBA at the time of origination and/or provided by an Issuer using the RFS "Various" record.
- (c) Perform a quarterly reconciliation to:
 - (1) Compare "active" MINS in RFS/EWODS to "active" MINS in MERS and follow up with Issuers to resolve non-matches.
 - (2) Compare "active but not matched" recorded in RFS/EWODS to MINS that are recorded on MERS as "inactive." Follow up with Issuers to resolve non-matches.
 - (3) Provide Ginnie Mae with the results of the reconciliation and discrepancies within fifteen (15) days of the reconciliation. Reconciliations are to be performed for the "Reporting Months" in January, March, June, and September; therefore, the data shall be collected, and the reconciliation performed in the following months i.e., February, April, July, and October.
- (d) Communicate discrepancies with Issuers and provide educational and technical assistance to Issuers and Ginnie Mae to resolve discrepancies and update RFS.
- (e) Using RFS or (with Ginnie Mae approval) back-end database updates, update MINS in EWODS.
- (f) Provide data queries to support Ginnie Mae's asset sales, Issuer default activities or other initiatives. Ginnie Mae cannot predict Issuer defaults. Ginnie Mae anticipates that Issuer defaults will not exceed one per month or twelve (12) per year.
- (g) Propose and, in coordination with Ginnie Mae, implement process and other improvements under this fixed-price CLIN. Contractor shall prepare additional and enhanced reports and interfaces for improved Ginnie Mae accessibility.

C.4.3.9.1 Digital Collateral Monitoring Support

Ginnie Mae is committed to developing and implementing the policies, technology, and operational capabilities necessary to take in digital promissory notes and other digitized loan files as acceptable collateral for our securities. Ginnie Mae has implemented a pilot program that enables Issuers to securitize digital mortgages. The pilot program enables Ginnie Mae to test the

approach, optimize processes and arrive at a strategy that promotes large-scale adoption. Ginnie Mae requires digital collateral monitoring support for this program including monitoring support of future enhancements to the program as it evolves and grows.

The Ginnie Mae Digital Collateral Guide (eGuide) provides the requirements applicable to Ginnie Mae MBS program participants that have been approved by Ginnie Mae to securitize digital pools or loan packages using Ginnie Mae's MBS Securitization Platform.

The Contractor must:

- (a) Perform the following monthly reconciliations of Ginnie Mae's digital collateral records compared to the MERS eRegistry and provide reporting of the results:
 - (1) Validate that all Ginnie Mae's digital collateral records match those on the MERS eRegistry at a loan level. Report any discrepancies to Ginnie Mae monthly.
 - (2) Review all Ginnie Mae digital collateral by loan and pool to validate the Issuer is a qualified Digital Collateral Issuer. Report any discrepancies to Ginnie Mae monthly.
 - (3) All communication to resolve discrepancies with Issuers needs to be made through Ginnie Mae. Routine communication with Issuers at Ginnie Mae's direction is permitted.
- (b) Monthly, review, monitor and report on all pending and completed transfers that include Digital Collateral to validate the transfer is compliant based on the current Ginnie Mae policies in effect on the transfer effective date. Report any discrepancies to Ginnie Mae monthly. All communication to resolve discrepancies with Issuers needs to be made through Ginnie Mae.
- (c) Support the enhancement of Ginnie Mae's Digital Collateral processes, procedures, internal controls, and reporting as they evolve.

C.4.3.10 Widely Held Fixed Investment Trusts (WHFITs)

- (a) Ginnie Mae facilitates Issuer compliance with IRS tax reporting requirements through the quarterly submission of supplemental securities and tax information. Determination of and compliance with IRS reporting is the Issuers responsibility and it is up to the Issuer to determine how to meet any IRS requirements. Issuers are not required to, but may, use the WHFIT module in RFS. Additional information about WHFIT reporting can be found in the MBS Guide, Appendix VI-18. Issuers can choose to use this optional WHFIT module. Ginnie Mae averages 200 WHIFT files per quarter. For more information, see *Attachment H: Ginnie Mae Profile*.
- (b) The RFS WHFIT module provides a means for Issuers to report the Original Issue Discount (OID) which is the monthly amortized amount of the OID, and the Market Discount Fraction (MDF) denominated in dollars and; the monthly market discount fraction, as calculated by the Issuer. Issuers that are not already disclosing this information on their website may report

the monthly WHFIT tax information, for all months within the quarter, no later than the 10th calendar day of the quarterly reporting month. Corrections must be submitted by the 15th calendar day. Issuers may submit WHFIT tax information monthly. However, uploaded files are not processed until the 15th calendar day of the quarterly reporting month (i.e., March, June, September, December). Issuers may also submit data, including corrected data, for prior quarter's submission.

The Contractor must:

- (1) Process Issuer WHFIT submissions on a quarterly basis.
- (2) Provide Issuer reported WHFIT to the MBSIBA each quarter for the end of March, June, September, and December with delivery after the quarter close-out in April, July, October and January. By the end of the tax year and calendar year, the Contractor shall deliver to the MBSIBA.
- (3) Provide a report to Ginnie Mae each quarter summarizing the number of MBS reported by each Issuer, date and number of records delivered to the MBSIBA.
- (4) Propose and, in coordination with Ginnie Mae, implement process and other improvements.

C.4.3.11 Custodial Account Verification (CAVS)

Ginnie Mae Issuers are required to maintain their principal and interest custodial accounts, and Multifamily Issuers are required to maintain their escrow accounts, in federally regulated financial institutions that are financially sound. Issuers demonstrate the soundness of the institutions to Ginnie Mae by certifying quarterly that the depository financial institutions meet criteria described in the MBS Guide. Issuers must use the mandatory CAVS module. Ginnie Mae averages 350 CAVS files per quarter. Of those files, one (1) on average are submitted late or missing information per quarter. For more information, see *Attachment H: Ginnie Mae Profile*.

The Contractor must:

- (a) Obtain and examine quarterly certifications from Issuers.
- (b) Perform follow-up work to obtain missing certifications.
- (c) Verify that the certifications are true and reflect the most recent information available to the Issuer.
- (d) Report compliance failures to Ginnie Mae within five (5) workdays after quarter-end.

C.4.3.12 SCRA Qualifications & Reimbursements

Under SCRA, Issuers may be forbidden from collecting interest more than 6 percent per annum on certain mortgages while the borrowers are on active military duty and for one year thereafter. Ginnie Mae may reimburse Issuers for such interest shortfalls under the terms defined in MBS

Guide. Ginnie Mae reimburses Issuers for interest due security holders above 6 percent for loans that qualify under the SCRA. For Issuers to receive reimbursement of interest, the Issuer must first demonstrate that the mortgagee meets the criteria for interest forgiveness in accordance with the SCRA. Loans are submitted for eligibility throughout the year through the Ginnie Mae Portal and a hard copy follow up sent to the Contractor. Cases that meet eligibility requirements are transmitted back to the Issuer through the Ginnie Mae Portal, along with a stamped hard copy approval sent to the Issuer. Denied cases are transmitted back through the Ginnie Mae Portal, when possible, and all denials are sent back "hard copy" to the Issuers with the reason for denial. See *Attachment H: Ginnie Mae Profile* for historical details. From time-to-time it is possible that the SCRA and associated rules and regulations may change.

C.4.3.12.1 Eligibility Requests

An Issuer may submit an eligibility request at any time to the Contractor. Prior to acceptance, the Contractor shall determine that:

- (a) The request relates to the Federal SCRA.
- (b) The call for duty is either Title 10 or Title 32 502(f).
- (c) The operation on the active-duty orders is an approved operation.
- (d) To be eligible, the name on the military orders, active duty start date and expected release date shall match the documentation provided by the Issuers.
- (e) Upon review each request is updated in RFS as "Approved" or "Denied" and Issuers can view eligibility requests within RFS. Hard copy documents sent by Issuers may contain Personally Identifiable Information or other sensitive information and should be secured by the Contractor.

C.4.3.12.2 Reimbursement

The Contractor must:

- (a) Qualify borrowers for reimbursement based on required documentation submitted by the Issuer and reviewed in accordance with the requirements in Ginnie Mae's MBS Guide and any subsequent All Participants Memos (APMs) or applicable regulations.
- (b) Provide Ginnie Mae with monthly reports containing the number of borrowers eligible for reimbursement and the number of borrowers denied.
- (c) Provide support and assistance to Issuers seeking to qualify borrowers.
- (d) Process the requests for reimbursement. Ginnie Mae averages 600 reimbursement requests per quarter.
- (e) Create a reimbursement file and deliver it to Ginnie Mae and the MBSIBA for payment. (Ginnie Mae and the MBSIBA are responsible for making payments to Issuers.) The

reimbursement file shall contain the Issuer identification number, Issuer name, Issuer address, Issuer contact information, the date the file is submitted to the Ginnie Mae MBSIBA, and the total amount to be reimbursed to each Issuer. The reimbursement payment files shall be submitted quarterly after each reimbursement period to Ginnie Mae by the 4th workday of the month following receipt.

- (f) Provide Ginnie Mae with quarterly reports containing total reimbursements, the number of borrowers for whom the Issuers received reimbursement, total reimbursements year to date, and since inception.
- (g) Respond to Issuer inquiries on the status of their reimbursement.

C.4.4 TASK FOUR – RISK & INFORMATION ANALYTICS *(Estimated 8,990 hours per year)*

C.4.4.1 Program, Portfolio, and Issuer Analysis

Ginnie Mae's objective is to have the Contractor provide robust data analytics, risk analysis, trend analysis, predictive analytics, and reporting on mortgage banking and mortgage finance, Ginnie Mae's MBS programs, Issuers, as well as Issuers' portfolios. This reporting should improve Ginnie Mae's existing capabilities and functionality to meet the analysis and reporting requirements of the PWS. To do this, the Contractor will need to leverage the capabilities of business intelligence tools, the existing functionality of Ginnie Mae systems (e.g., GPADS, IOPP, CW, DART, and the Ginnie Mae Dashboard Suite), as well as related sources as applicable. Additionally, the Contractor shall provide Ginnie Mae the capability to sort, analyze or cut program, issuance, Issuer, and Issuer portfolio data in multiple ways when Ginnie Mae is using and generating MBSOA reports. Ultimately, Ginnie Mae requires analysis and reporting capabilities that ensure flexibility to provide analysis as well as new reports, as requested, easily and quickly based on Ginnie Mae's changing business needs. Often the same types of reports needed for program analysis are also needed for Issuer and Issuer portfolio analysis.

Additionally, the Contractor will provide support to Ginnie Mae and specifically Ginnie Mae's Enterprise Data Solutions (EDS) Division in strategizing enhancements for existing/new solutions, accommodating new data sources, and provisioning data access in alignment with evolving reporting needs and Ginnie Mae's overarching analytics vision. This also includes working collaboratively with EDS in managing data requests from stakeholders.

The Contractor must provide the reports listed in *Attachment I: MBSOA Risk and Information Analytics Reports* based on the frequency noted in the attachment (weekly, monthly, or quarterly). Examples of these reports are provided in this section. The base year will include the 33 reports in Attachment I plus up to 15 new reports per year for a not to exceed total of 50 specific reports.

C.4.4.1.1 Program Analysis

Ginnie Mae performs program analysis and risk management for all its programs which consist of Single Family, Multifamily, HMBS, Multiclass Securities, and Manufactured Housing programs. This area of focus also includes analysis and statistics on the insuring agencies' existing and proposed programs. The insuring agencies include the FHA, VA, USDA RD, and HUD PIH. Ginnie Mae also performs analysis on other Federal and Government-Sponsored Enterprises (GSE) (e.g., Federal Home Loan Banks, Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, loan Programs and Presidential initiatives (e.g., SCRA, Home Affordable Refinance Program (HARP), and Home Affordable Modification Program (HAMP)).

The Contractor must:

- (a) Provide analysis and reporting on Ginnie Mae MBS programs, insuring agencies, other Federal and GSEs as well as Presidential initiatives. Examples of report types include but are not limited to:
 - (1) *The Monthly Mortgage Information Management System (MIMS) Report*: A monthly report summarizing the portfolio characteristics of Single Family, Multifamily, Manufactured Housing and HECM Issuers. The report also assesses Issuer's default risk, financial risk, compliance risk and insurance risk.
 - (2) *Performance Measures Report*: The estimates of Ginnie Mae's market share of SF FHA fixed, SF VA fixed, MF FHA, and RD. The report should also include an analysis of the extent to which certain agency programs are not eligible for Ginnie Mae pooling.
 - (3) *Regulatory Actions Report*: An analytics report on recent agency actions (i.e., Federal Deposit Insurance Corporation (FDIC), Office of the Comptroller of the Currency (OCC), National Credit Union Administration (NCUA) and The Federal Reserve) and enforcement actions against Issuers and program participants. The report is filtered for Ginnie Mae participants with actions and sorted by date from oldest to newest. It identifies Ginnie Mae participants with actions and provides the specific actions, where available, for additional detail.

C.4.4.1.2 Issuer and Issuer Portfolio Analysis

Ginnie Mae performs monthly Issuer analysis and risk management to monitor Issuer risk and to assess if each Issuer is meeting the ongoing eligibility guidelines to participate in the MBS program as identified in the MBS Guide. Ginnie Mae Issuers may include depositories, non-depositories, Housing Finance Agencies, Real Estate Investment Trusts (REITS), the Federal Home Loan Bank of Chicago and other types of Issuers. Issuer analysis should incorporate Issuer financial and operational analysis as well as MBS Guide compliance. Ginnie Mae also performs

Issuer portfolio analysis and risk management for MBS pools, loans, and securities across all program types.

The Contractor must:

- (a) Provide detailed information on each Issuer and provide a means to easily analyze this data that enables Ginnie Mae staff to quantify and gauge the potential risk each Issuer poses to Ginnie Mae. Provide analysis and reporting on Issuers' portfolios across all programs.

Examples of reports include but are not limited to:

- (1) *Quarterly Net Worth/Liquidity/Capital Requirements Report*: A quarterly report of adjusted net worth, capital ratios, and liquid assets for each Issuer. The report compares the Issuers' financial measures to appropriate program standards to determine compliance with Ginnie Mae minimum requirements. The report also includes trend analysis to evaluate Issuer financial standing over time, as well as capital ratios for parent companies of which Issuers are subsidiaries.
- (2) *Watch List Report*. A categorization of Issuers' portfolios by risk category based on delinquency risk, financial risk, compliance risk, and insurance risk.
- (3) *Quarterly CAVS Report*. A quarterly report that shows the results of the Contractor's independent check on the ratings of the funds custodians that the Issuers use, per Section 16-8 of the MBS Guide.

C.4.4.1.3 New Risk & Information Analytics Reporting

Ginnie Mae anticipates developing the following new types of reports with the Contractor during the first six (6) months of the project start not to exceed 15 new reports in the base year (these 15 new reports are included in the 50 total number of reports for the base year included in the FFP). This list provides a sampling of the new reports Ginnie Mae intends to develop under this TO:

- (a) *Funds Custodians*: An analytics report that documents who is holding custodial funds for Ginnie Mae Issuers. The report would include the amount of funds each Custodian holds per Issuer. This should include the complete list of funds custodians.
- (b) *Pooling Errors Analysis*: An analytics report that provides root cause analysis on Issuers pooling errors. The Contractor will leverage the monthly Suspense Records Summary and Detail Report to provide root cause analysis on Original Principal Balance (OPB), loan type, maturity date and interest rate suspense items. Review the RFS exceptions / error levels to ensure alignment with the Ginnie Mae Guide. As part of the root cause analysis, identify pooling errors that are a violation of MBS Guide pooling requirements and potential defective loans.
- (c) *Pooling Error Remediation Strategies and Recommendations*: The Contractor must review RFS pooling and data reporting errors including the materially level (critical, high, medium, low) and assist Ginnie Mae in developing remediation strategies, plans and steps in order to

correct the aforementioned errors.

C.4.4.1.4 Technical Advisory Queries

Provide technical advisory queries or research to facilitate the detection, quantification, and mitigation of risks in the MBS programs. The technical advisory queries or research must utilize data obtained from multiple sources by the Contractor and include commonly available material in the public domain to perform the analysis. Technical advisory queries fall under the technical advisory definition explained in *Section C.3.3 Ginnie Mae Definitions and Terminology*. Ginnie Mae averages approximately 40 technical advisory queries a month. The estimated level of effort for these requests varies as noted in the below table.

Technical Advisory Queries		
Level of Effort	Level of Effort Per Request	Percentage of Requests
Low Effort	Less than 10 hours	40%
Medium Effort	10 – 40 hours	40%
High Effort	More than 40 hours	20%

C.4.4.1.5 Document and Materials Review

Review and provide expert advice to Ginnie Mae in drafting MBS Guide changes, APMs, Ginnie Mae forms, web content, manuals, handbooks, and other internal or external related materials. Review and validate for completeness, consistency, accuracy and ensure operational and policy alignment, not to exceed 60 per year. Assess if policy changes have any system and application impacts and recommend updates, if required. Ensure RFS procedures are up to date to current Ginnie Mae policy and procedures.

C.4.4.1.6 Field Review Support

The Contractor will support Ginnie Mae's Field Review Contractor in maintaining legacy pool and loan samples to support field review testing. In order to ensure alignment with Ginnie Mae's Compliance Review Guide and Document Custodian Review Manual, revamping of various legacy pool and loan sampling reports will need to be undertaken. The Contractor will work

with Ginnie Mae to develop, augment, and/or replace the legacy sampling reports to ensure the robustness of Ginnie Mae's Field Review sampling. The Contractor will oversee the successful upload of Field Review findings and necessary mitigation of findings from the Field Review Contractor and/or Ginnie Mae for Issuers and Document Custodians. The Contractor may support and complete updates to Field Review data files and acceptable values within EWODS/GPADS as required by Ginnie Mae (approximately 5 requests per year) to the extent that Field Review data updates can't be completed by the Field Review Contractor. Requests include data transmission troubleshooting, updates to AE Code, Field Review Codes, Field Review Status Code, etc.

C.4.4.2 Analytics and Risk Applications

There is several key applications Ginnie Mae has deployed to support the MBS Risk Analysis functions. The Contractor will provide O&M support services for these applications as part of *Task Five – Operations, Maintenance & Minor Enhancements*. These O&M services include system maintenance and monitoring, defect resolution, data loads and validation, data archives, account administration, report and dashboard generation, system and manual documentation updates, and end user support. These applications include GPADS, IOPP, CW, DART, MOR, GMARS and GMODS as summarized below. Over the life of the TO, Task Five will cover the cost of any O&M required to support any new or enhanced Risk Analysis applications, databases, dashboards and related. These applications generate many of the reports described as examples in *Section C.4.4 Task Four – Risk and Information Analytics*.

(a) Ginnie Mae Operational Data Stores (GMODS)

The GMODS is a vital component of Ginnie Mae's enterprise data architecture. It serves as a central point of integration for data sourced to Ginnie Mae's business intelligence and analytics suite of applications. The GMODS data is a subject-oriented, relational database that is primarily comprised of pool and loan level data. Ginnie Mae sources the GMODS data from multiple internal and external sources. Much of its data is sourced from EWODS. It also houses MSS reported data as well as pool and loan disclosure data. GMODS data is used as a feeder to downstream data marts that support IOPP, CW, DART, GMARS, and MOR.

The Contractor must:

- (1) Load data according to required production schedule and frequency (daily, weekly, and monthly).
- (2) Notify Ginnie Mae when new or updated production data is ready for consumption.
- (3) Before release, reconcile, review, and approve in accordance with Ginnie Mae's data certification policies in respect to completeness, validity, accuracy, timeliness, and

frequency of occurrence. Immediately, notify Ginnie Mae of any discrepancies and reasons for discrepancies.

- (4) Implement new or update existing quality assurance processes and controls when necessary, working closely with Ginnie Mae, to ensure data certification and validation activities are commensurate with Government security and data management audit mandates. Complete these activities within six (6) months of deployment.
- (5) Monitor and ensure data loads and scheduled production processes are performed according to production schedules specified or approved by Ginnie Mae, and in compliance with established SLAs.
- (6) Perform updates to inbound and outbound interfaces that may be impacted by minor enhancements to the application. This includes updates to ETL routines.
- (7) Update or develop user manuals, online help, and other related operations documents to ensure the system and its processes are easily understood.

(b) Ginnie Mae Portfolio Analysis Database System (GPADS)

GPADS is a module within RFS. GPADS provides Ginnie Mae the capability to track and monitor performance and conduct risk analysis for both the overall loan portfolio as well as for individual Issuers. This is accomplished by analyzing financial and operational information obtained from Issuers and other sources. By combining the GPADS analytical results and the information and analysis from other applications (e.g., CW and IPA), Ginnie Mae is able to effectively evaluate and support the approval of Issuers' Commitment Authority. GPADS supports over 200 reports and dashboards including:

- Issuer Analysis: Summary and detail statistics, such as total loans, pools, RPB, delinquencies, geographic composition, and benchmarking, etc.
- Lender Analysis: Basic statistics for each agency (e.g., FHA, VA, PIH, and RD) and a total for each lender.
- Program Queries: Views of overall portfolio by program, Issuer, and lender.

Prior to 2021, Ginnie Mae implemented a number of Tableau-enabled Dashboards to replace reporting capability historically found in GPADS. During the period of performance of this TO, it is expected that the remaining functionality provided by GPADS will be replaced by additional Tableau Dashboard reports and potentially other reporting solutions. Once this is complete, Ginnie Mae's plan is to decommission the GPADS application. Until this occurs, the Contractor will support the current functionality and reporting requirements in GPADS and the Tableau Dashboards.

The Contractor must:

- (1) Update the GPADS module using monthly loan data received from Ginnie Mae's EWODS. The loan and pool data shall be updated into GPADS on or before the 10th workday of the month.
- (2) Notify Ginnie Mae when new or updated production data is ready for consumption.
- (3) Before release, reconcile, review, and approve in accordance with Ginnie Mae's data certification policies in respect to completeness, validity, accuracy, timeliness, and frequency of occurrence. Immediately, notify Ginnie Mae of any discrepancies and reasons for discrepancies.
- (4) Monitor and ensure data loads and scheduled production processes are performed according to production schedules specified or approved by Ginnie Mae, and in compliance with established SLAs.
- (5) Update the GPADS with field review and financial statement review results submitted directly to Ginnie Mae or through a Ginnie Mae Contractor.

(c) Issuer Operational Performance Profile (IOPP)

IOPP is designed for Ginnie Mae to measure an Issuer's performance and performance trends against specific operational and default metrics. IOPP enables our Issuer partners to better understand Ginnie Mae's expectations and what is important to Ginnie Mae. IOPP provides Issuers with a framework and methodology from which they can gauge their effectiveness against a predetermined set of Ginnie Mae expectations (metrics) as well as how they rank against their peers. IOPP helps to drive internal consistency in monitoring the business activities across the broader population of Ginnie Mae Issuers and lays down the basis for providing constructive feedback to Issuers. IOPP improves overall Issuer management through integrated and formalized processes and procedures that define and measure participant performance in Ginnie Mae programs. IOPP uses two key sets of metrics to measure the Issuer's against their peers; operational metrics to measure the ability of an Issuer to operate effectively and default metrics to measure the ability of an Issuer to manage its delinquent portfolio effectively. Effectiveness scores are determined by rating each Issuer against a pre-defined peer group and applying a weighted algorithm that incorporates various metrics. Effectiveness results are communicated monthly to the Issuer. The IOPP module utilizes various performance calculations, field review reports, and MBSIBA operational reports in the Issuer performance evaluation.

The Contractor must:

- (1) Provide resources to contribute to, participate in, and support MBSOA Contractor team activities and functions associated with the analysis, planning, strategy, and software maintenance throughout the life of the IOPP tool.
- (2) Notify Ginnie Mae when new or updated production data is ready for consumption.

- (3) Before release, reconcile, review, and approve in accordance with Ginnie Mae's data certification policies in respect to completeness, validity, accuracy, timeliness, and frequency of occurrence. Immediately, notify Ginnie Mae of any discrepancies and reasons for discrepancies.
 - (4) Implement new or update existing quality assurance processes and controls when necessary, working closely with Ginnie Mae, to ensure data certification and validation activities are commensurate with Government security and data management audit mandates. Complete these activities within six (6) months of deployment.
 - (5) Monitor and ensure data loads and scheduled production processes are performed according to production schedules specified or approved by Ginnie Mae, and in compliance with established SLAs.
 - (6) Perform updates to inbound and outbound interfaces that may be impacted by minor enhancements to the application. This includes updates to ETL routines.
 - (7) Update or develop user manuals, online help, and other related operations documents to ensure the system and its processes are easily understood.
 - (8) Provide User Training as appropriate not to exceed more than 12 training sessions per fiscal year.
 - (9) Respond to technical advisory research requests not to exceed more than 20 per month.
 - (10) Address new enhancement and resolution of defects in particular, new bugs/issue identification, and resolutions.
 - (11) Execute functionality updates.
 - (12) Maintain and update using the required HUD format User Aids including: IOPP Scoring Methodology, IOPP Definitions - Single Family and HMBS, IOPP Definitions - Multifamily, and User Manuals - Ginnie Mae User, User Manual - Issuer User.
 - (13) Provide monthly reports including: IOPP Peer Group Listings, GMEP IOPP Report, as well as IOPP Monthly Update of SF and MF trends.
 - (14) Participate in conference calls with Issuers as technical advisor to Ginnie Mae, not to exceed more than 20 per month.
 - (15) Participate in a monthly conference call with Ginnie Mae (Office of Issuer and Portfolio Management (OIPM)) to discuss the status of IOPP.
- (d) Corporate Watch (CW)
- The CW system is designed to complement GPADS functionality by enabling Ginnie Mae users to measure key risk and performance characteristics needed to perform counterparty risk monitoring. This risk analysis tool is Ginnie Mae's repository for all counterparty risk measures and analysis. Since July 2012, Ginnie Mae has relied on CW as a key system that provides risk and performance measures that improve the ability for Ginnie Mae to monitor counterparty risk through:

- Centralized risk management of Ginnie Mae's exposure to counterparties at an aggregate

and entity level, including Issuers, sub-servicers, document custodians, principal, and interest (P&I), as well as taxes and insurance (T&I) custodians;

- Ability to manage counterparty exposure through the calculation of limits and identification of current and future exposure;
- Use of an Issuer Risk Grades model and reporting to help Ginnie Mae assess the creditworthiness and financial health for each counterparty;
- Reporting detailing the components of the risk grade for mortgage banks;
- Administrative capability to set customized exposure limits and final assigned risk grades;
- Ability for analyst to set up a customized portfolio of counterparties and define custom risk criteria;
- What if scenarios to analyze pending portfolio transfers and mergers;
- Integration of HMBS notional exposure;
- Linkage with Salesforce to view an Issuer's credit review and assessment;
- Inclusion of external data on various reports, including Watch List indicators, FHA indemnifications, GSE portfolio balances, and Ginnie Mae Issuer Mortgage Servicing Rights (MSR) values;
- Custom automated trigger notifications;
- Custom notifications, including manual limits and ratings, reason for no limits, and ratings source as well as management reporting dashboards.

CW's utility and value are derived through synergy with multiple complex data sources; thus, the Contractor shall obtain, manipulate, and load a wide variety of data from multiple sources periodically. Typically, but not exhaustively or always, this entails the following: Generally, all data work must relate or aggregate at the entity level. For example, 1) a single Issuer doing business under the Single Family and Multifamily MBS program, that Issuers combined exposure must be calculated at the entity level; 2) two subsidiaries of a parent must consolidate to show risk metrics at the parent/consolidated level; 3) Other business line or entity consolidations as encountered within the MBS program. All data imports must be supplementary (not overwritten) so that historical and/or trend risk analytics is possible.

The Contractor must:

- (1) Obtain, modify, and quality review the external data feed Mortgage Bankers Financial Reporting Form (MBFRF) (or substitute) for non-depository Issuers. Certain value-add data analysis/modification will be necessary to report at the entity level. Import into the CW system.
- (2) Obtain, modify, and quality review the external data feed for depository Issuers. This may be from SNL subscription, FDIC data, FFIEC data feeds, or equivalent data source

at Ginnie Mae's discretion. Certain value-add data analysis/modification will be necessary to report at the entity level. Import into the CW system.

- (3) Obtain, modify, and quality review the internal Issuer, loan, and or securities data feeds for all Issuers for selected data values. This may be from GPADS, EWODS, RFS, etc. at Ginnie Mae's discretion. Certain value-add data analysis/modification will be necessary to report at the entity level. Import into the CW system.
- (4) Obtain, modify, and quality review the Exposure data for all Issuers. Certain value-add data analysis/modification will be necessary to report at the entity level. Import into the CW system.
- (5) Obtain and import the external data feed corporate credit ratings from Subscribed External Rating Agencies into the CW system. Currently, these are Moody's, S&P, and Fitch.
- (6) Obtain and import the external data feed servicer ratings from Subscribed External Rating Agencies into the CW system. Currently, these are Moody's, S&P, and Fitch.
- (7) Support Ginnie Mae's Machine Learning (ML) models using open source programming packages to detect unseen Issuer risk and enhance counterparty risk monitoring following Ginnie Mae's Machine Learning SOP.
 - (i) Monitor the necessary R libraries for the ML models and follow the processes outlined in Ginnie Mae's open-source software approval SOP to download or update R packages, as necessary. Update the global parameters in the Ginnie Mae ML code to perform deep dives into results.
 - (ii) Test and validate the data flowing from GMODS into the Tableau Machine Learning Dashboard.
 - (iii) Assist Ginnie Mae staff in interpreting the Machine Learning Dashboard and Issuer clusters.
 - (iv) Prepare draft quarterly ML executive briefings on key trends, takeaways, and emerging areas of risk from the ML models. Refine draft reports with OER feedback and present final results in quarterly sessions.
 - (v) Perform model developer and model governance activities detailed in Ginnie Mae's Model Risk Management plan.
- (8) CW's end-user experience and deliverables shall be, at a minimum, consistent with the items explained in this section. In addition to the supplementary reports and report sections maintained in the CW system, the Contractor must maintain the following baseline reports within the CW system:
 - (i) Use applicable data available to produce a rating.
 - (ii) Use applicable data available to produce an exposure report.
 - (iii) Use applicable data available and a calculation methodology to produce a limits report.
 - (iv) Use applicable data available and a calculation methodology to produce a financial

statement underwriting report.

- (v) Use applicable data available and a calculation methodology to produce an Issuer risk grade detail report. This task uses a data intensive percentile ranking methodology.
- (vi) Maintain an interface that allows managerial data updates which override data or calculations (manual risk grade or limits grading).
- (vii) Use applicable data available and a calculation methodology to produce administrative reports from the CW system.

(e) Data Analysis and Reporting Tool (DART)

DART is a data querying tool that utilizes a Business Objects platform. DART's functionality enables internal Ginnie Mae users to easily retrieve historical pool and loan data to gain a better understanding of past performance of mortgage-backed securities and answer questions from Issuers and Investors. The tool provides access to pool level, loan level, pool disclosure, and loan disclosure data with basic reporting capabilities.

The Contractor must:

- (1) Load data from EWODS by the 6th workday of each month.
- (2) Notify Ginnie Mae when new or updated production data is ready for consumption.
- (3) Before release, reconcile, review, and approve in accordance with Ginnie Mae's data certification policies in respect to completeness, validity, accuracy, timeliness, and frequency of occurrence. Immediately, notify Ginnie Mae of any discrepancies and reasons for discrepancies.
- (4) Implement new or update existing quality assurance processes and controls when necessary, working closely with Ginnie Mae, to ensure data certification and validation activities are commensurate with Government security and data management audit mandates. Complete these activities within six (6) months of deployment.
- (5) Monitor and ensure data loads and scheduled production processes are performed according to production schedules specified or approved by Ginnie Mae, and in compliance with established SLAs.
- (6) Perform updates to inbound and outbound interfaces that may be impacted by minor enhancements to the application. This includes updates to ETL routines.
- (7) Update or develop user manuals, online help, and other related operations documents to ensure the system and its processes are easily understood.

(f) Master Subservicer Operational Reporting (MOR)

MOR is a centralized data repository that provides advanced analytics and reporting on Ginnie Mae's MSS and enables consistent views of Ginnie Mae's MSS portfolio

performance. It supports MSS loan level operational reporting, and self-service querying capability. MOR collects, processes, and validates data provided by Ginnie Mae's MSSs. It is integrated with RFS to enable data reconciliations of the MSS provided data to the relevant RFS data.

The Contractor must:

- (1) Notify Ginnie Mae when new or updated production data is ready for consumption.
- (2) Before release, reconcile, review, and approve in accordance with Ginnie Mae's data certification policies in respect to completeness, validity, accuracy, timeliness, and frequency of occurrence. Tie loan population counts to defaulted Issuer portfolio accounting reports (for non-pooled loans) and RFS (for pooled loans). Immediately, notify Ginnie Mae of any discrepancies and reasons for discrepancies.
- (3) Implement new or update existing quality assurance processes and controls when necessary, working closely with Ginnie Mae, to ensure data certification and validation activities are commensurate with Government security and data management audit mandates. Complete these activities within six (6) months of deployment.
- (4) Monitor and ensure data loads and scheduled production processes are performed according to production schedules specified or approved by Ginnie Mae, and in compliance with established SLAs.
- (5) Perform updates to inbound and outbound interfaces that may be impacted by minor enhancements to the application. This includes updates to ETL routines.
- (6) Update or develop user manuals, online help, and other related operations documents to ensure the system and its processes are easily understood.

(g) Ginnie Mae Analytics and Reporting System (GMARS)

GMARS dashboards are a suite of data visualization solutions enabled by Tableau. The suite of dashboards provide staff the ability to interact with an aggregate view of Ginnie Mae's Issuer, pool, loan, and other data as a tool for analysis, decision-making, and monitoring. A number of dashboards specifically targeted to the OIPM staff provide the capability to analyze and monitor Issuers' performance, trends, and organizational health for Ginnie Mae's Single Family, Multifamily, and HMBS programs. These dashboards provide transparency into populations with specific characteristics (such as delinquencies, liquidations, and transfer activity), as well as insight into volatile populations (such as COVID-19 and hurricane/disaster-impacted loans). As Ginnie Mae progresses in retiring legacy reports in GPADS and other applications, it is anticipated that GMARS will become a "one-stop shop" for key enterprise reporting for Ginnie Mae's leaders, executives, and business users. The Contractor will support GMARS which consists of the following dashboards, some of which have multiple dashboard views:

- Single Family (SF)
 - SF OIPM Dashboard
 - SF Need-to-Know Dashboard
 - SF Financial Dashboard
 - SF Delinquency Profile Dashboard
 - SF Liquidations Dashboard
 - SF Transfer Activity Dashboard
 - Correspondence Dashboard
 - HMBS Dashboard
- Multifamily (MF)
 - MF OIPM Dashboard
 - MF Need-to-Know Dashboard
 - MF Financial Dashboard
- Disaster Operations
 - Disaster Operations Dashboard
 - COVID-19 Response Dashboard
- Monitoring
 - Integrated Compliance Review Dashboard
 - Insurance Matching Dashboard
- Executive
 - BOS Report

If additional development of new GMARS dashboards or major enhancements of existing dashboards are required, this work will be covered under *Optional Task Seven – Enhancements, Integrated Software Development and Transformation Initiatives Support*.

The Contractor must:

- (1) Notify Ginnie Mae when new or updated production data is ready for consumption.
- (2) Before release, reconcile, review, and approve in accordance with Ginnie Mae's data certification policies in respect to completeness, validity, accuracy, timeliness, and frequency of occurrence. Immediately, notify Ginnie Mae of any discrepancies and reasons for discrepancies.
- (3) Implement new or update existing quality assurance processes and controls when necessary, working closely with Ginnie Mae, to ensure data certification and validation activities are commensurate with Government security and data management audit mandates. Complete these activities within six (6) months of deployment.
- (4) Monitor and ensure data loads and scheduled production processes are performed

according to production schedules specified by Ginnie Mae, and in compliance with established SLAs.

- (5) Update or develop user manuals, online help (training), and other related operations documents to ensure the system and its processes are easily understood within six (6) months of deployment.
- (6) Monitor application performance and issues, initiating escalation procedures when warranted.
- (7) Perform troubleshooting and defect resolution related to the application, in close cooperation with Ginnie Mae's CAMO Contractor and internal operations team.

(h) Salesforce

Salesforce is used to support workflow and decision management, end-to-end relationship management and workflow automation capabilities such as new Issuer applicant review, Issuer management, and various approval, governance, and administration functions. There are interfaces between Salesforce.com and Ginnie Mae applications that are hosted by the MBSIBA and the MBSOA. Salesforce is highly integrated with the MBSIBA Integrated Pool Management System (IPMS) applications to support business processes for Master Agreement approval, Commitment Authority approval and transfer of servicing rights approval. The MBSIBA does not use Salesforce but does ensure that data exchange between IPMS and Salesforce are functioning properly. Additionally, the MBSOA utilizes Informatica Extract Transform and Load, Informatica Dynamic Data Masking, Application Programming Interfaces and CipherCloud.

The Contractor must:

- (1) Operate and maintain Salesforce applications and interfaces and provide customer support to Ginnie Mae users and coordinate with other Ginnie Mae Contractors. The maintenance typically includes recurring periodic data imports from the RFS system.
- (2) Operate and maintain Salesforce custom modules. Ginnie Mae utilizes custom designed modules based on the Salesforce platform. These include the Application Connection and Decision Management modules. Application Connection is a partially public facing module that allows private industry to apply to become a Ginnie Mae Issuer. Decision Management is an internal module that allows Ginnie Mae to document a business request and record management's decision (this is distinct from standard Salesforce approval workflows).
- (3) Perform user interface changes, queries, report building, and other minor enhancements and integration activities of less than 500 hours apiece.
- (4) Provide support to Ginnie Mae's asset sales and Issuer default activities.
- (5) Maintain a list of Ginnie Mae and other Salesforce licensed users, provide monthly

updates and reporting to assist Ginnie Mae in forecasting and managing license requirements. Ginnie Mae will provide the Salesforce licenses as part of Government Furnished Applications, Source Code and Services (Section H.3). The Contractor shall assist Ginnie Mae in managing the Salesforce licensing, distribution, and reporting. The Contractor shall work with Ginnie Mae's Salesforce license providers when procuring licensing in support of this requirement.

- (6) Ensure data integrity, timely data uploads and maintenance of data in order to support risk management activities and transactional components in Salesforce such as Commitment Authority, Pool Transfers, and Pool Issuance with Immediate Transfer (PIIT). The integrity of this information and the associated integrated functionality with Ginnie Mae applications hosted by the MBSIBA is essential to appropriate risk management and transactional efficiency.

C.4.4.3 Independent Public Accountant (IPA) Support for Issuer Audited Financial Statement Review

The IPA module is part of RFS. It captures Ginnie Mae Issuer annual audited financial statement information (financial statements) and allows for the evaluation of the financial statements based upon a set of criteria defined by Ginnie Mae. Issuers are required to deliver their financial statements to Ginnie Mae via an upload functionality in RFS. Ginnie Mae engages a separate Contractor, Financial Statement Review Agent (FSRA), to retrieve the Issuer financial statements and supplemental reports and to perform the audited financial statement reviews by entering relevant financial data into the IPA module. The FSRA Contractor transmits the review ratings as well as other key Issuer information from the financial statements to Ginnie Mae's IPMS, which is maintained by the MBSIBA. This process is currently linked to Ginnie Mae's Commitment Authority (CA) approval process. Any delays or interruptions in the transmission of key financial information can delay compliance and relevant financial information from being available for Ginnie Mae to process CA requests. In addition, the current system users cannot easily access the financial information within the IPA module for their own analysis and decision-making purposes.

The Contractor must:

- (a) Act as the RFS IPA module system administrator.
- (b) Process system user access requests. Grant the IPA Contractor user access to the RFS IPA module to enable the FSRA Contractor to perform and complete Ginnie Mae Issuer financial statement reviews.
- (c) Process RFS IPA Change Requests (CR) when needed and ensure Issuer Final Review ratings are in sync in the IPA module and the IPMS to support the CA approval process. Periodically, a data CR is required to update an incorrect Final Review rating in the IPA module. For example, logic in the IPA system cannot currently recognize a Ginnie Mae

granted Issuer requirement waiver. This can result in a false “bad” review rating which requires correction. The MBSOA Contractor shall process these requests by performing a manual override of the false “bad” rating to a “good” rating via a CR. Historically, the largest volume of CR’s is processed during the months of April and May annually during the time when close to 90% of all the Ginnie Mae Issuer financial statement reviews are completed.

- (d) Provide an *IPA Review Summary Report* summarizing all audited financial statement review activity. This report includes historical audited financial statement review results, including the annual review ratings of “good” or “bad”, identifies the test failure that led to a “bad” rating for those reviews with a final “bad” rating and whether any material defects or significant deficiencies were observed. The frequency of the report deliverable is as follows:
 - Calendar Quarter 1, 3, and 4: Twice Monthly at weeks two and four
 - Calendar Quarter 2: Once per Week. April – June is the audited financial statement review busy season and thus reporting is required weekly.
- (e) Support periodic Ginnie Mae ad hoc reporting requests to enable Ginnie Mae to perform broader financial analysis of its Issuers.
- (f) Provide technical analysis and support to remedy periodic IPA system errors discovered during the audited financial statement review process.

C.4.4.4 Risk Review of New Issuer Applications

Ginnie Mae reviews all potential Issuers applying to the MBS program based upon comprehensive factors. These factors include a company’s financial strength, management team’s breadth and understanding, business plan viability, MBS production capability, servicing plan, quality control, servicing expertise of the company and its staff, and securities expertise. Ginnie Mae averages two to three new Issuer applications per month, not to exceed 60 per year.

(a) New Issuer Application Assistance

The Contractor shall support and assist in processing new Issuer applications by collecting, compiling, initially reviewing, and presenting required information from all new Issuer applicants for Ginnie Mae’s review.

Specifically, the Contractor shall act as the initial review team responsible for the following:

- (1) Review submitted Issuer’s application package using the Ginnie Mae approved Issuer application system.
- (2) Follow up with applicants on missing required information until a complete package is received.
- (3) Follow up with applicants for additional information as requested by Ginnie Mae.
- (4) Draft Justification Memos on completed applications using the Ginnie Mae approved Justification Memo template for Ginnie Mae’s completion, review, and approval.

(5) Monitor Ginnie Mae's application hotline and applicant's email inquiries.

(b) New Issuer Application Process

Typically, this process spans seven (7) discrete phases over a 71-day managerial timeline:

- (1) New application received. The Contractor starts reviewing the submitted application.
 - (2) The Contractor reviews the submitted documentation in Salesforce using an internal checklist in Excel, then creates the initial punch list based on outstanding items. The Contractor emails the punch list to the applicant, providing the applicant 30-days to submit the requested information.
 - (3) When the Contractor receives all the items requested, the Contractor updates the Excel checklist.
 - (4) The Contractor performs an internal quality control check to ensure all items have been received and comply with Ginnie Mae's eligibility standards.
 - (5) The Contractor drafts the Justification Memo in Microsoft Word in the prescribed template. This justification is a factual summary and is neutral in its recommendation. Ginnie Mae continues to work on this document and is responsible for its approval.
 - (6) The Contractor performs an internal quality control check to ensure the draft Justification Memo accurately summarizes all the required items.
 - (7) The Contractor finalizes the Justification Memo, uploads it to Salesforce, and passes the review process to Ginnie Mae.
- (c) The Contractor shall provide Ginnie Mae with a weekly New Issuer Applications Status Report reflecting the number of applications received by program type, the application workflow status, and the days in each stage of the process. The Contractor shall notify Ginnie Mae promptly of any issues or slippage in the application process including what actions are being taken by the Contractor to bring the project back on track.
- (d) The Contractor shall assist Ginnie Mae in the periodic review of the overall new Issuer application program design to identify and recommend improvements to the program from a design, process, and operational execution perspective. This review will enable the Contractor to provide holistic and actionable recommendations to Ginnie Mae for program improvements, including reviewing the business processes, policies, SOPs, and supporting work activities.
- (e) The Contractor shall support Ginnie Mae in any materials and documentation requirements for the new Issuer application program.
- (f) The Contractor shall provide support and minor enhancements to Salesforce.com as part of this FFP CLIN.

C.4.4.5 Mortgage Bankers Financial Reporting Form (MBFRF) Analysis - Data Quality Checks

Ginnie Mae relies on Issuers to report their financial results on the MBFRF quarterly.

Information includes income statements, balance sheets, and various schedules describing other financial attributes in greater detail. Data reported in the MBFRF needs to be both internally consistent (i.e., consistent across all schedules) as well as consistent with audited financial statements (produced only annually). Quarterly, the Contractor shall review pre-defined data quality checks for errors and coordinate directly with Ginnie Mae Issuers to have errors corrected. The Contractor shall continue to follow up directly with Ginnie Mae Issuers until errors are resolved. Data quality error checks will be defined each quarter and will vary quarter to quarter based on perceived needs. The number of defined data quality error checks each quarter will not exceed five (5) checks per quarter, for each Issuer. Defined data quality error checks will be common to all Issuers.

C.4.4.6 Establish and Maintain Third Party Data Interfaces

The Contractor must interface and obtain administrator access to third party provided financial analysis and data services to support Ginnie Mae's analytics needs. The Contractor shall ensure the loading of all applicable data into the appropriate Ginnie Mae internal system(s) on an on-going basis. Currently, Ginnie Mae has direct licenses with these third-party vendors to provide this information:

- (1) Mortgage Bankers Financial Reporting Form (MBFRF)
- (2) SNL Financial, LC (SNL)
- (3) Fitch Solutions, Inc. (Fitch)
- (4) Moody's Analytics Inc. (Moody's)
- (5) Standard & Poor's Financial Services LLC (S&P)

C.4.5 TASK FIVE – OPERATIONS, MAINTENANCE & MINOR ENHANCEMENTS *(Estimated 37,633 hours per year)*

C.4.5.1 Operations and Maintenance (O&M)

(a) O&M

O&M encompass the ongoing operations and maintenance of Ginnie Mae's MBS securitization platform(s) which includes O&M services for all software, applications, technical and other resources necessary to support the production systems required to perform the activities outlined in this TO:

- (1) "Operations": Refers to any activity or resources necessary to utilize or "run" production software and infrastructure on a day-to-day and recurring basis. This includes software and infrastructure that may be implemented over the term of this TO.
- (2) "Maintenance": Means any activity necessary to support production software and any

associated licenses, facilities, and other resources necessary to support the activities under this TO. This includes minor enhancements or changes requiring less than 500 hours of labor per minor enhancement. A Minor Enhancement is defined as any business, process, service, or technology improvement that will take the Contractor less than 500 labor hours to implement.

O&M encompasses the definitions above and all activities required to support the production of IT systems necessary to perform activities set forth in this TO.

Ginnie Mae's objective is for the Contractor to provide the necessary skills and adequate staffing to support the applications, technologies, software, compliance, and related items and provide operations and maintenance for all processes necessary to support the services and minor enhancements in this TO. This also encompasses the future implementations of software, technologies, and business processes to the extent that they are reasonable and consistent with the broad skill sets and expertise required to support the processes and technologies in production at time of project start. For example, a new software implementation and future enhancements that use existing technologies, skillsets or staffing would be covered under this line item.

(b) Enhancements

- (1) The objective is for Ginnie Mae to receive continuous process, system, and application enhancements in a cost-effective manner. Any effort by the Contractor to "package" or "bundle" enhancements from non-related requirements and business processes into groupings in excess of 500 hours is not authorized.
 - (i) Included under the "maintenance" portion of this section are updates or enhancements to production systems requiring less than 500 hours of labor defined and used herein as "minor" changes or enhancements. This encompasses defects ("bug" fixes) as well as changes to accommodate new requirements or minor enhancements to functionality, process improvements, or infrastructure. It also includes enhancements and fixes to applications, reports and processes deployed over the term of the TO (see references to skillsets/staffing limitations and CO determination referenced below).
 - (ii) Minor enhancements less than 500 hours do not require PPM documentation to be updated at the time of the minor enhancement. Any minor enhancements that require Ginnie Mae Project Planning and Management (PPM) Life Cycle V2.0 documentation and related documents to be updated will be updated as part of the requirement to keep all application and system documentation updated on a quarterly basis per *Section C.4.5.2 O&M for Applications Used to Provide and Support MBSOA Services and Section C.4.2.10 Content Management Solution* for

- annual document certification requirements.
- (iii) The Contractor shall maintain an inventory and backlog of minor enhancements along with an estimated completion date for each minor enhancement. The Contractor shall provide this information to Ginnie Mae in a monthly report.
 - (iv) Notwithstanding the 500-hour threshold, the Contractor shall perform, at the Contractor's expense, any bug fixes or defect remediation to any software deployed by the Contractor regardless of the level of effort.
 - (v) The Contractor shall identify and suggest process improvements and enhancements individually by work breakdown structure.
 - (vi) The Contractor shall complete minor enhancements based on a mutually agreed upon schedule with Ginnie Mae.
- (2) If the Contractor believes a future enhancement or additional activities such as ETL's, batch processes, system monitoring, etc. does not meet the minor enhancement criteria (500 hours or less); could not reasonably have been anticipated; or requires a significant increase in staffing level, or additional skill sets, the Contractor shall notify the COR and the TPOC in writing. The Contractor's notification should include a justification and supporting documentation explaining why the future enhancement does not meet the minor enhancement criteria. The Contractor must provide this notification within 24 hours of becoming aware of the issue and prior to deployment. The CO will make a determination as to how to proceed. The Contractor will not proceed without written direction from the CO.
 - (3) As enhancements are introduced over the course of the TO, each enhancement will be subsumed into the existing O&M pricing or an equitable adjustment will be made to the O&M pricing, as mutually agreed to by the Contractor and the Government.
 - (4) In addition, production fixes, enhancements, patches, and hardware upgrades are deployed approximately 30 weekends per year. Occasional emergency fixes are allowed during the work week. The remaining weekends are blocked from production deployments due to monthly first six (6) workday activities, disaster recovery tests, and holiday schedules. Each weekend deployment schedule is approved by Ginnie Mae on Thursday, and averages ten deployments, during each deployment weekend.

C.4.5.2 O&M for Applications Used to Provide and Support MBSOA Services

- (a) The Contractor is responsible for providing O&M for all the following Ginnie Mae applications:

MBSOA Applications Table for O&M

<p>RFS Data Collection & Reporting Applications: Ginnie Mae uses RFS applications to run its regular MBS data collection and reporting tasking including:</p>	<p>RFS Risk & Information Analytics Applications: Ginnie Mae uses RFS applications to perform MBS analytics and risk tasks including:</p>
<ol style="list-style-type: none"> 1. Contact Management (CM); 2. Custodial Account Verification System (CAVS); 3. Data Disclosure (DD); 4. E-Notification (EN); 5. HMBS Reporting and Administration (HRA); 6. Independent Public Accounting (IPA); 7. Matching and Suspense (MAS); 8. Pool Accounting & Exception Feedback (PAEF), Single and multifamily modules; 9. RFS Administration (ADMIN); 10. Servicemembers' Civil Relief Act (SCRA); 11. Widely Held Fixed Investment Trust (WHFIT); 12. Cloud Data Analytics Platform (CDAP) 	<ol style="list-style-type: none"> 13. Corporate Watch (CW); 14. Data Analysis and Reporting Tool (DART); 15. Ginnie Mae Analytics and Reporting System (GMARS) 16. Ginnie Mae Meta Data System (GEMS); 17. Ginnie Mae Operational Data Store (GMODS); 18. Ginnie Mae Portfolio Analysis Database (GPADS); 19. Issuer Operational Performance Profile (IOPP); 20. Master Subservicer Operational Reporting (MOR); 21. Bulk Data Disclosure;
<p>Webservices, Application and Utility Infrastructure: Ginnie Mae uses webservices applications and infrastructure to support the MBS data collection and reporting functions.</p>	<p>Non-RFS Applications/Tools: Ginnie Mae also uses these non-RFS application to perform MBSOA tasks:</p>
<p>This includes: SharePoint, CipherCloud/ Salesforce, SAP Business Objects, Tableau, Informatica, Microsoft .NET, Oracle WSRP Producer for .NET, Oracle Webcenter, SAS Client and Server, NFS, MyPassword, Jira, SVN, IPMS Print, MBFRF SQL Scripts, SFTP, and RPA, ValiMail/SMTP, AWS SES/Exchange, terminal emulation, Jira, Subversion, GIT, ServiceNow, SFTP, Remote Access, NFS.</p>	<ol style="list-style-type: none"> 22. MyGinnieMae 23. Salesforce 24. Validation and Testing Tool (VTT) 25. ORAD SharePoint Tool 26. Natural Language Generations currently Quill Narrative Science Tool 27. Digital Access Management Solution (DAMS) 28. Machine Learning 29. Ginnie Mae Connect (GMC) 30. ARIS 31. Project Management Platform 32. Enterprise Innovation Management currently IdealScale

	33. VMMR Data Processing 34. Data Integrations (Box, Sharepoint, etc.) 35. DataDog 36. Oracle Identity and Access Management Suite
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The Contractor must perform the following tasks annotated below and in the Infrastructure RACI for all applications listed in the MBSOA Applications table:

- (1) Provide database and system administration functions such as, but not limited to, the use, administration and maintenance of databases, online storage management, online capacity planning, business applications, user training and other miscellaneous administrative duties as well as performance management and reporting.
- (2) Operate and maintain all Ginnie Mae business applications related to this TO and as annotated in the Ginnie Mae Infrastructure and Application RACI Matrix.
- (3) Prepare, update, and provide to Ginnie Mae electronic documentation in accordance with HUD's PPM including but not limited to process flows, network diagrams, systems documentation, as well as the policies and procedures necessary to perform MBSOA activities. Update this documentation semi-annually and provide it to Ginnie Mae.
- (4) Provide the necessary skills and adequate staffing to support the applications, technologies, software, application monitoring, application scanning, performance monitoring, compliance, and related items and provide operations and maintenance for all processes necessary to support the services in this TO.
- (5) Maintain system interfaces and interoperability to support the full range of applications functions and services as well as their network functionality and management.
- (6) Suggest and implement continuous process improvements in respect to maintaining data quality and the movement of data across platforms and interfacing with other Ginnie Mae contractors.
- (7) Identify any gaps, and document, define as well as continue to update the interfaces between all application services to be invoked, processing frequencies, targets, sources, inputs, and outputs, etc.
- (8) Maintain secure application operations of the application – its front-end interface and supporting technology, as well as the back-end application infrastructure, and databases in which information is stored.
- (9) Perform planning, development, design, testing, and go-live activities for minor enhancements to application interfaces, as well as related minor changes to underlying data structures.
- (10) Perform change and release management, configuration management and technology

- upgrades and patches in accordance with Ginnie Mae's governance and standards.
- (11) Perform troubleshooting and defect resolution in close cooperation with Ginnie Mae's internal operations team, other contractors, and Ginnie Mae's CAMO Contractor. Conduct performance testing and diagnosis monitoring to validate platform performance.
 - (12) Remediate any system and/or software vulnerabilities in accordance with HUD's and Ginnie Mae's security policy.
 - (13) Monitor application performance, issues, usage, and tuning as annotated in the Ginnie Mae Infrastructure RACI Matrix.
 - (14) Implement new or update existing quality assurance processes and controls when necessary, working closely with Ginnie Mae, to ensure data certification and validation activities are commensurate with Government security and data management audit mandates.
 - (15) Ensure user management, back-up, and archiving activities are performed as annotated in the Ginnie Mae Infrastructure RACI Matrix, and in accordance with Government standards.
 - (16) Monitor and ensure data loads, scheduled production processes, ETLs, and automated reports are generated according to production schedules specified or approved by Ginnie Mae, and in compliance with established SLAs.
 - (17) Perform updates to inbound and outbound interfaces that may be impacted by minor enhancements to the application.
 - (18) Manage user administration as annotated in the Ginnie Mae Infrastructure RACI Matrix.
 - (19) Provide systems maintenance, patching and monitoring of applications, database tables, ETLs mapping/ workflows, SAP, SAS and Webservices Applications and utility infrastructure as annotated in the Ginnie Mae Infrastructure RACI Matrix.
 - (20) Provide capacity planning activities as annotated in the Ginnie Mae Infrastructure RACI Matrix.
 - (21) Ensure that application enhancements follow Ginnie Mae's PPM System Development Life Cycle (SDLC) methodology which meets Capability Maturity Model Integration (CMMI) Level III requirements
 - (22) Provide and or update SOPs within thirty days of application or process change and annually.
 - (23) Maintain and Update O&M Manuals within thirty days of application or process change and annually.
 - (24) Maintain and update User Manuals within thirty days of application or process change and annually.
 - (25) Perform in accordance with National Institute of Standards and Technology (NIST), Federal Information Security Management Act (FISMA), OMB-130, OMB-127,

- OMB-123 and all applicable Ginnie Mae, HUD and Federal guidelines.
- (26) Coordinate all matters related to hardware and software infrastructure with Ginnie Mae.
 - (27) Establish User Access and Security Controls as required for applications. The Contractor shall grant the appropriate access levels for all hosted data and applications to authorized personnel as annotated in the Infrastructure RACI Matrix. In addition, the Contractor shall perform application security scans in coordination with the CAMO security team and mitigate identified vulnerabilities (in accordance with NIST and agency standards). The Contractor shall utilize application monitoring tools, services and solutions provided by the Infrastructure providers. Approval by Ginnie Mae is required for all application monitoring tools services and solutions.
 - (28) The Contractor shall compile the SA&A Package to validate the security of the system in accordance with HUD and Ginnie Mae Policy for all vendor responsible application infrastructure. The Contractor shall apply appropriate and suitable patches and system software upgrades as required to maintain compliance.
 - (i) The services shall ensure that newly released patches or upgrades to servers are distributed and installed as part of the release and deployment management processes and procedures.
 - (ii) Document research & configuration baselines for all patches and version upgrades.
 - (iii) Associated integration testing processes, procedures, and documented results.
 - (iv) Patch deployment/rollout schedules and results across the various environments to minimize disruption of service in the production environment.
 - (v) Submission of the patch to the appropriate review boards, including security, for approval.
 - (vi) Test all patches in non-production prior to deploying to production. All testing and validation will be documented and reported.
 - (29) The Contractor shall ensure all application infrastructure is maintained in compliance, up to date with current versions of custom application software without inducing extended system downtime or outages (See SLA's).
 - (30) The Contractor shall respond to, coordinate, and manage all application change requests for additions, removals, modifications, and changes to the application environment to include standard maintenance utilizing the Agency provide CM tools.
 - (31) The Contractor shall participate in the weekly Change Control Board, follow all processes, policies, procedures, and directives.
 - (32) The Contractor shall provide support for all application environments included in the TO to include but not limited to DEMO, DEV, DR, PRD, QA, STG, PreProd, SIT, TST, TRN and UAT.
 - (33) The Contractor shall continuously monitor application security controls of the

applicable applications to determine if the security controls in the information system can continue to be effective over time in light of changes that occur in the system and environment.

- (34) The Contractor shall report on all applicable applications on an ongoing basis and inform Administrators when changes occur that may impact the security of the application.
- (35) In coordination with the CAMO provider, the Contractor shall perform review activities and provide monthly security reports to include, but are not limited to, weekly application vulnerability scanning, web application scanning, and database scanning of applicable systems that support the processing, transportation, storage, or security of Ginnie Mae Information.
- (36) In coordination with the CAMO provider, the Contractor shall support monthly user access validation and reporting.

(b) Incident Reporting and Operational Performance

The Contractor shall perform continuous monitoring 24/7/365 of all production systems and mitigate performance incidents based on service level metrics.

- (1) Technical Incident: A technical incident is defined as an event, either accidental or deliberate, that results in unauthorized access, loss, disclosure, modification, or destruction of information technology systems, applications, or data.
- (2) Operational Incident: An operational incident is defined as any failure that has a material impact upon the operation of any production system especially, an impact upon data quality, timelines, or user impact. Priority 1 and Priority 2 Operational Incidents would include instances in which the user impact is widespread and no practical work-around would be appropriate.

The Contractor must produce and provide the following system status reporting:

- (1) Immediately notify the COR and Ginnie Mae's Chief Risk Officer of any known or suspected incident, or any unauthorized disclosure of the information contained in the system(s) to which the Contractor has access.
- (2) If a Priority 1 or Priority 2 Operational Incident occurs, the Contractor shall immediately notify Ginnie Mae's Office of Securities Operations (OSO) representative.
- (3) Operational and Technical Incident Emails & Reporting:
The Contractor shall report any failures of jobs to complete successfully or other events that could impact the timely execution of deliveries, data files, table updates, etc. that may impact Ginnie Mae business partners by:

(i) Incident Notification:

The Contractor must notify the TPOC and members of the Securities Operations Group via telephone and email of a production incident within one (1) hour of

becoming aware of the incident.

(ii) Initial Incident Report:

Submit an Initial Incident Report within 12 hours of the incident via email to the TPOC and members of the Securities Operations Group. The Contractor shall suggest the format and details of the report. At a minimum, the report shall summarize (1) the business impact, such as which system or business functions were compromised and which business reports or users were affected including a description of the jobs, procedure or process that failed, (2) the root cause, (3) the probable timeframe for problem resolution, the estimated time for full availability to users, and (4) the Contractor's corrective actions.

(iii) Incident Analysis Report:

If all this information cannot be included in the Initial Incident Report, the Contractor shall send an email notification to the TPOC and the Securities Operation Group providing further analysis of the incident along with an estimated time frame and plan of action for when the issue will be resolved. The Contractor shall provide this Incident Analysis Reporting to the TPOC and the Securities Operations Group within five (5) calendar days of the incident.

(iv) Production Problems Resolution Email:

The Contractor must also notify the TPOC and Securities Operation Group within 24 hours via e-mail when the Contractor's Team has resolved a production problem.

(v) Monthly, the Contractor must provide a summary of the number and category of incidents to the TPOC as part of the Monthly Systems O&M Status Report explained below.

(c) Monthly Systems O&M Status Report

The Contractor must ensure all operations meet the established SLA's. Monthly, the Contractor shall provide the TPOC with a monthly systems status report relating to all its O&M activities.

(d) Change Requests (CR):

(1) Adhere to Ginnie Mae's Change Management Policies and Procedures. Participate in weekly change management meetings as hosted by Ginnie Mae to coordinate changes and releases across Ginnie Mae's Contractors and environments. Provide weekly status reports for all production defects, CRs, and system releases. The Contractor shall:

- (i) Ensure that changes are documented and distributed and installed as part of the release and deployment management processes and procedures.
- (ii) Document research & configuration baselines for all changes.
- (iii) Associated integration testing processes, procedures, and documented results.
- (iv) Change deployment/rollout schedules and results across the various environments to minimize disruption of service in the production environment.

- (v) Submission of the change to the appropriate review boards, including security, for approval.
 - (vi) Test all changes in non-production prior to deploying to production. All testing and validation will be documented and reported.
 - (vii) All changes must be completed as per the planned and approved change date or must be canceled and a new request for change submitted.
 - (viii) All changes will be coordinated with all affected teams as required (GFAS, MBSIBA, SLDB, VMMR, CAMO).
- (2) If upgrades or changes are needed within the application infrastructure and/or databases in accordance with HUD standards, the Contractor shall prepare a CR and submit the CR with an inclusive status of degraded performance and recommend actions to the Securities Operations Director and TPOC for prioritization and subsequent remediation steps. Ginnie Mae assigned staff will submit the request to the Change Control Board.
 - (3) The Contractor must develop, implement, and continuously improve on the change management processes and approval workflows behind the configuration changes of the managed platform and the cloud platform. The Contractor shall maintain, at a minimum, the level of service and response time as outlined in the service level metrics. The Contractor must submit a Change Request Summary no later than (NLT) five (5) workdays after completion of the configuration change.

(e) Data Architecture

The Contractor is responsible for assuring that the data architecture documentation is kept current.

The Contractor must:

- (1) Update the data architecture documentation at a minimum of semi-annually.
- (2) Update the data architecture documentation any time there are changes made to the data architecture.
- (3) Provide Ginnie Mae with a copy of updated documentation.

(f) Configurations

The Contractor must:

- (1) Support WAN/LAN/infrastructure testing related to applications supporting this TO.
- (2) Perform configuration management techniques as per Ginnie Mae policies and procedures.
- (3) Assess and mitigate the impacts that system and schema changes have on Ginnie Mae operations:
 - (i) Using Ginnie Mae's IT Service Management (ITSM) Configuration Management tools the Contractor shall track and control the status of all system configurations to

ensure version control, thereby ensuring that application modifications are built logically, incrementally, and under positive change management.

- (ii) Be able to identify the current software and/or application versions under usage.
- (iii) Conduct routine audits of the applications to ensure version control.
- (iv) Comply with Ginnie Mae's change control and configuration management policies and procedures.

(g) Data & Quality Assurance

Ginnie Mae's contractors work in a highly integrated environment which includes the collection, movement and distribution of data and quality assurance activities as data is shared and moved between environments and contractors. Data is received and utilized by the MBSOA from sources such as Issuers, the housing guaranty agencies, other Ginnie Mae contractors, and other external parties. Various contractors and business partners also collect, produce, or provide data to Ginnie Mae for use in their risk analysis and program compliance monitoring. Data will be written to or retrieved from EWODS databases and exchanged with other contractors or written to other Ginnie Mae data warehouses and data marts. Over the span of this TO, it is anticipated that the quantity and velocity of data collected and moved across contractors and environments will increase.

A major objective of the MBSOA TO is to provide improved controls over the quality and movement of data across Ginnie Mae's enterprise and to provide continuous improvement as Ginnie Mae implements additional data warehouses and data marts.

The Contractor must:

- (1) Coordinate the collection of data and additional data sources from Ginnie Mae Contractors, HUD, and other business partners for storage in EWODS, ODS, data lake or other data repositories.
- (2) Support and maintain all data activities necessary to support the requirements of the TO.
- (3) Be responsible for the quality of data received, processed, and written to the databases in the performance of this TO.
- (4) Be responsible for data masking and creation of synthetic business data as required.
- (5) Identify the intersection of data received from other Ginnie Mae contractors and implement and maintain documentation and controls to monitor and improve the quality of data used as inputs to the MBSOA processing. This includes the exchange and validation of all data between the MBSOA Contractor and the MBSIBA such as the Informatica ETLs and the exchange of data to and from Salesforce and other data transfer activities.
- (6) Within six (6) months of project start, Ginnie Mae and the Contractor shall agree upon an

initial suite of data quality reporting metrics and processes. The Contractor shall demonstrate incremental improvements over the life of the task order.

(h) Data Disclosure O&M

The Contractor is responsible for ongoing O&M related to Ginnie Mae's Data Disclosure environment and related processes.

The Contractor must:

- (1) Provide for ongoing operations and maintenance of the monthly forbearance processing and forbearance data for disclosures. As a part of the monthly forbearance disclosure process prepare and provide a monthly status report of the forbearance reporting; provide a forbearance inventory report; and provide a monthly forbearance delinquency report to Ginnie Mae's Office of Capital Markets.
- (2) Perform data quality monitoring of pool new issuance loan level data, with emphasis on the various data quality. Maintain and operate monthly data quality e-Notes, and follow-up with Issuers to resolve problems.
- (3) Perform requirements analysis and impact assessment for new Data Disclosure offerings and for new products that require additional disclosures (such as disclosure requirements related to a new MBS Pool Type).
- (4) Maintain the Disclosure Data Download, Disclosure Data History, REMIC and Platinum Data, Test Data Files, and Legacy Data File pages of the website, including for any new items including implementing the new slots for new files. Also provide for any scripting to enable file processing and job stream for any such new disclosure files to be posted to the Data Download pages.
- (5) Maintain the full range of disclosure search pages on the website, to include the main Data Disclosure Search, the Multifamily Search, the Multifamily Legacy Search, and the Tax and Factor Search.
- (6) Assist Ginnie Mae with the drafting and publication of disclosure bulletins, Notes & News notices, and other publications as identified by Ginnie Mae for communicating new changes or additions to disclosure files, the Disclosure Search function, or other aspects of Ginnie Mae's current disclosure processes and/or timing.

(i) Operational Risk Analysis Division (ORAD) SharePoint Tool O&M

The OER ORAD leads and manages Ginnie Mae's Enterprise Risk Management (ERM) program along with several other risk related programs. ORAD utilizes a SharePoint risk solution to store risk data, provide advanced reporting capabilities and support workflow automation. The ORAD SharePoint risk solution is currently built on Microsoft Office 365 (SaaS) suite of applications including: SharePoint Online, Power Automate, and Power BI to

store risk data, provide advanced reporting capabilities (i.e., dashboards, canned reports with drill down capabilities) and support workflow automation. The ORAD SharePoint Tool currently uses the HUD SharePoint environment. The ORAD SharePoint Tool currently has the following pre-established functionality and capabilities:

ORAD SharePoint Tool	Current Functionality/Capabilities
Site Pages	14
Document Repositories	6
List and Data Stored Within	18
User Permission Groups	7
Power BI Reports	30
Power Automate Workflows	20

The Contractor shall provide O&M support for the ORAD SharePoint Tool functionality over the contract period of performance. The estimated hours for ORAD SharePoint Tool support are as follows annually for O&M, minor enhancements, and the Annual Data Loads:

	Estimated Hours
O&M	130
Minor Enhancements	170
Annual Data Load	150
Total	450

The Contractor must:

- (1) Maintain the functional operation of the team site, including routine workflow checks, routine reporting of dataset refreshes, routine review of site accessibility, routine review of site functionality against new Microsoft SaaS rollouts.
- (2) Perform troubleshooting and defect resolution including permissions issues, workflow errors, reporting refresh issues, and other items impacting the functionality of the SharePoint site.

- (3) Support monthly and quarterly Risk Appetite reporting with the ORAD SharePoint Tool including tolerances, performance indicators and associated metrics. Ginnie Mae's Enterprise Risk Appetite represents qualitative and quantitative limits describing the amount of risk, on a broad level, Ginnie Mae is willing to accept (or not accept) when making decisions related to the pursuit of its enterprise-level strategic goals and their associated outcome measures. It is an active measurement of performance with risk indicators developed at both the enterprise-level and Ginnie Mae Office-level. The Risk Appetite reporting is an automated process that leverages monthly risk analysis and reporting data produced by the Contractor under *Task Four – Risk & Information Analytics*.
- (4) Review any impacts and recommend new features pushed to HUD's platform via Microsoft's SaaS.
- (5) Develop and/or update O&M and user governance artifacts to include manuals, policies, and flowcharts as it pertains to the tool annually.
- (6) The Contractor shall support the following Ginnie Mae programs within the tool and support minor enhancements for new reports as well as the Annual Data Load of the risk register(s) data for these programs:
 - (i) Enterprise Risk Management (ERM)
 - (ii) Operational Incidents (OI)
 - (iii) Risk Control Self-Assessments (RCSA)
 - (iv) A-123, Appendix A
 - (v) Vendor Risk Management (VRM)
 - (vi) Model Validation

(j) ARIS Connect/Designer O&M

The system allows for the creation and storage of operational process maps. Ginnie Mae's Offices have extensive business processes. These processes have both a narrative and visual component. This software creates the visual components, which are saved individually, and also incorporated into the narrative. Many of the Process Flow charts are extensive and difficult to maneuver, let alone create, without a software program. ARIS is currently a cloud service.

(1) Application Support

The Contractor shall:

- (i) Perform all standard O&M (software patching, vulnerability remediation, resolve application issues, etc.) in all applicable environments (Prod, Dev, and Test). Some of the software patching and updates will require coordination with Software AG/Cloud Service Provider (CSP).
- (ii) Manage and perform all software updates and/or configuration changes based on

new software version releases and/or minor enhancements or functionality changes. Some of the software patching and updates will require coordination with Software AG/Cloud Service Provider (CSP).

- (iii) Provide integration support for any new data sources as required.
 - (iv) Perform all application data refreshes as required to support routine business operations.
 - (v) Follow and utilize Ginnie Mae's Change Management process for all applicable system changes.
 - (vi) Assist with secure connectivity, identity and access management and integration with Ginnie Mae's Identity and Access Management solutions.
- (2) The Contractor must create, manage, and update system documentation as required:
- (i) Create, manage, and update SA&A documentation as required based on HUD and/or Ginnie Mae security policies.
 - (ii) Create, manage, and update system and/or project documentation based on HUD PPM process and deliverables.
 - (iii) Create, manage, and update any system specific documentation (Concept of Operations (CONOPS), Solution Architecture Document (SAD), etc.) or other related documentation (Reference Architecture, etc.).
 - (iv) Authority to Operate (ATO) requirements gathering; determination of applicable controls; coordination and interview sessions with Ginnie Mae representatives; and completion of ATO package documents.
 - a) Coordination with Ginnie Mae and the software vendor (Software AG) to determine the controls that can be inherited, and those that are shared and those that are the sole responsibility of Ginnie Mae.
 - b) Coordination with Ginnie Mae to understand Ginnie Mae's policies and procedures in relation to NIST 800-53 Rev. 4/5 Control Families
 - c) Coordination with Ginnie Mae to understand Ginnie Mae's control implementation and management approach and mechanisms.
 - d) Document and deliver the following ATO package documents:
 - 1) Federal Information Processing Standards (FIPS) 199 System Categorization
 - 2) Privacy Threshold Analysis/Privacy Impact Assessment
 - 3) E-Authentication
 - 4) System Security Plan
 - 5) Disaster Recovery Plan
 - 6) Incident Response Plan
 - 7) Configuration Management Plan
 - 8) Information System Contingency Plan

(k) Quill Narrative Science Tool

Narrative Science has created a tool called Quill that transforms data into English language descriptions. Currently, Ginnie Mae is working with Narrative Science on a pilot program. The pilot will use data from the MBFRF to create written reports describing the counterparty credit quality. After this first use case is developed, Narrative Science will require ongoing maintenance to react to changes in the MBFRF and to changes in Ginnie Mae's Internal Rating Grade system. There may be additional use cases for Quill, but those will be developed through separate contracts.

(1) Application Support

The Contractor must:

- (i) Perform all standard O&M (software patching, vulnerability remediation, resolve application issues, etc.) in all applicable environments (Prod, Dev, and Test). Some of the software patching and updates will require coordination with Narrative Science.
 - (ii) Manage and perform all software updates and/or configuration changes based on new software version releases and/or minor enhancements or functionality changes. Some of the software patching and updates will require coordination with Narrative Science.
 - (iii) Provide integration support for any new data sources as required.
 - (iv) Perform all application data refreshes as required to support routine business operations.
 - (v) Follow and utilize Ginnie Mae's Change Management process for all applicable system changes.
- (2) The Contractor must create, manage, and update system documentation as required:
- (i) Create, manage, and update SA&A documentation as required based on HUD and/or Ginnie Mae security policies.
 - (ii) Create, manage, and update system and/or project documentation based on HUD PPM process and deliverables.
 - (iii) Create, manage, and update any system specific documentation (CONOPS, SAD, etc.) or other related documentation (Reference Architecture, etc.).

(l) Digital Access Management Solution (DAMS)

Ginnie Mae's DAMS is built on Alfresco's enterprise content management platform.

(1) Application Support

The Contractor must:

- (i) Perform system monitoring and respond to any system fault or issue.
- (ii) Perform all standard O&M (software patching, vulnerability remediation, resolve application issues, etc.) in all applicable environments (Prod, Dev, and Test).
- (iii) Manage and perform all software updates and/or configuration changes based on new software version releases and/or minor enhancements or functionality changes.
- (iv) Provide integration support for any new data sources as required.
- (v) Support standard configurations within Alfresco such as defining metadata for folders/files, creating document/file libraries, creating document workflows, and other document management process support.
- (vi) Follow and utilize Ginnie Mae's Change Management process for all applicable system changes.
- (vii) Perform data backup in accordance with Ginnie Mae's policies and procedures.
- (2) The Contractor must create, manage, and update system documentation as required:
 - (i) Create, manage, and update SA&A documentation as required based on HUD and/or Ginnie Mae security policies.
 - (ii) Create, manage, and update system and/or project documentation based on HUD PPM process and deliverables.
 - (iii) Create, manage, and update any system specific documentation (CONOPS, SAD, etc.) or other related documentation (Reference Architecture, etc.).

(m) Innovation Lab O&M Support:

The Contractor must:

- (1) Establish and document the Innovation Lab Virtual Lab alignment with the current governance structure of the CAMO hosting environment.
 - (i) Define the management and administration of the lab environments, including spin up/spin down of servers and/or applications to support Innovation Lab activities.
 - (ii) Support and manage updates to the project plan(s), attendance at work group meetings, change control, project management, quality assurance and related administration.
 - (iii) Support user access management to the virtual lab as required.
- (2) Support NextGen integration between Innovation Lab and Virtual Lab and manage alignment to Ginnie Mae governance.
- (3) Perform all standard O&M (software patching, vulnerability remediation, resolve application issues, etc.) in all applicable environments (Prod, Dev, and Test).
- (4) Manage and perform all software updates and/or configuration changes based on new software version releases and/or minor enhancements or functionality changes.
- (5) Provide integration support for any new data sources as required.
- (6) Follow and utilize Ginnie Mae's Change Management process for all applicable system

changes.

(n) VMMR Support

- (1) Maintain the production schedule of monthly jobs to copy files specified by Risk Analysis to the VMMR Contractors (currently Ernst & Young & Guidehouse) VMMR servers.
- (2) Maintain the monthly job to copy the Moody's/ Issuer pool/loan data files successfully to VMMR Contractors VMMR servers and check for data completeness.
- (3) Automate transfers of Disclosure Pool and Loan files from the Disclosure database to the VMMR servers.
- (4) Conduct ad hoc database queries in support of VMMR analytics.

(o) Ginnie Mae Website

Ginnie Mae maintains and operates the web site www.ginniemae.gov to support the public, investors, Issuers, Document Custodians, and other business partners, as well as for Ginnie Mae staff use. Ginnie Mae uses the website to communicate information about changes to Ginnie Mae's programs, policies, and business operations with Issuers, Document Custodians, investors, business partners and external stakeholders. The Ginnie Mae Website Infrastructure is provided by the CAMO program. The CAMO program provides infrastructure administration, configuration, patching and operating system management for this platform. The CAMO program provides support for applications and databases managed by the MBSOA.

The Contractor must:

- (1) Manage and maintain the website application, databases, tools and supporting application infrastructure as per the established Infrastructure RACI Matrix.
- (2) Maintain and provide required updates or refreshes to ensure a fully operational website 24/7. This includes all portions of the website necessary to support data disclosure and bulk downloads of data disclosure.
- (3) Maintain Section 508 compliance, incorporating functionality to address disabled and handicapped users.
- (4) Add or modify technical components of website pages per instructions provided by the web manager via the TPOC.
- (5) Perform all website activities to support data disclosures to capital markets.
- (6) Support all data for charts in Ginnie Mae's Program and Products area of the website.

(p) Quarterly Technology Refresh Reporting

- (1) Quarterly, the Contractor shall provide the TPOC electronic copies of a recommended

Technology Refresh Report to support the processes within scope of this TO, unless waived by the TPOC in writing. This Technology Refresh Report shall include potential upgrades required to Ginnie Mae GFP and non-GFP to ensure compliance, on an annual basis. Ginnie Mae will decide whether to accept the report recommendations. At a minimum, the Technology Refresh Report must contain the following information:

- (i) A detailed description of the differences between the existing TO items and/or services and those proposed, as well as a specific analysis of the comparative advantages and disadvantages of the existing and proposed items.
 - (ii) A statement as to how the technology refresh will affect performance, costs, such as lease vs. buy, etc., if adopted.
 - (iii) An evaluation of the effects the technology refresh would have on Life-Cycle-Costs, such as existing services, site modification, energy, etc.
 - (iv) An analysis of the amount of effort required to complete modifications, upgrades or enhancements relating to the technology refresh.
 - (v) Intended upgrades to application software, particularly when the software would no longer be supported pursuant to the Technology Refresh Report or the capacity for efficient processing is constrained and will negatively impact Ginnie Mae's operations.
 - (vi) An implementation plan for the changes the Contractor shall make as a result of the Technology Refresh Report.
 - (vii) Identification of any risks associated with any of the suggested changes.
- (2) Business Cases for Technology Improvements: All technology improvements are based on Ginnie Mae's ongoing operational needs and requirements.
- (i) The Contractor must submit business cases to the TPOC when technology improvement or compliance needs are identified by either Ginnie Mae or the Contractor.
 - (ii) Ginnie Mae or the Contractor can initiate enhancements and technology improvements. Ginnie Mae must review and provide approval in writing for all requested technical improvements prior to implementation. These technology improvements are subject to the 500 hour enhancement rule and are paid for under the *Task Seven – Enhancements, Integrated Software Development and Transformation Initiatives Support CLIN* only when the improvement exceeds the 500 hour threshold.
 - (iii) Subject to Ginnie Mae's approval of the business case, the Contractor shall either purchase, acquire or assist in the purchase of software, support and other IT related components on Ginnie Mae's behalf or it will be purchased by Ginnie Mae.
 - (iv) All agreements made by the Contractor, on behalf of the Government, shall contain transferability rights to the Government or its designee, upon request, unless otherwise waived, in writing, by the CO.

(q) File Storage, Maintenance & Retrieval

Data received, created, or provided as part of this TO must be retained for historical and research purposes. The Contractor must adhere to National Archives and Records Administration (NARA) policies and regulations when dealing with the transfer and storage of data, including data determined to contain personally identifiable information. Data should be archived in a manner that provides for ease of location via basic search and/or query methods, presenting it in a usable format. Hard copy documents are currently stored off-site at Iron Mountain.

The Contractor must:

- (1) Establish, store, maintain and retrieve archived records, files, and data in a readable format and in accordance with NARA policies and regulations as related to the services performed under this TO. All existing MBSOA records related to this TO must be transferred from the incumbent to the new MBSOA Contractor.
- (2) Provide an annual File Storage Inventory Report of archived records, files, and data in file storage.
- (3) Acknowledge receipt of Ginnie Mae research and retrieval requests within 24 hours of the request and provide an estimated timeline for delivery. Respond to research and retrieval requests from Ginnie Mae within a reasonable timeframe. Ginnie Mae estimates less than five (5) of these requests per year.
- (4) Provide all current and archived records to Ginnie Mae at the conclusion of the TO.

(r) Support Machine Learning (ML) O&M following Ginnie Mae's ML SOP.

(s) Appian System Maintenance Tasks

The Contractor must:

Perform system monitoring of Ginnie Mae Appian sites and respond to any system fault or issue.

- (1) Review and report to Ginnie Mae on the findings of Appian health check reports.
- (2) Coordinate and perform tasks for access management to Ginnie Mae Appian Sites.
- (3) Perform all standard O&M in all applicable environments (Prod, Dev, and Test) to include bug fixes and minor enhancements for any of the task automation, integrated workflows, business process management capabilities, and/or functionality changes.
- (4) Coordinate with Appian to ensure all software updates and/or configuration changes based on new software version releases.
- (5) Support and manage integration troubleshooting and resolution with other Ginnie Mae platforms and Portals.

- (6) Perform and/or coordinate with Appian to remediate any security vulnerabilities in the Appian environment.
- (7) Follow and utilize Ginnie Mae's Change Management process for all applicable system changes.
- (8) Perform data backup in accordance with Ginnie Mae's policies and procedures.
- (9) Conduct the deployment of new Appian applications or customization to Ginnie Mae UAT and Production Sites.
- (10) Respond to any audit information requests that are related to the system or technology.
- (11) Create, manage, and/or update SA&A documentation as required based on HUD and/or Ginnie Mae security policies.
- (12) Create, manage, and update system and/or project documentation based on HUD PPM process and deliverables.
- (13) Create, manage, and update any system specific documentation (CONOPS, SAD, etc.) or other related documentation (Reference Architecture, etc.).
- (14) Coordinate all system Plan of Actions and Milestones (POAMs) and ensure they are remediated based on the specified timeframes associated with the level of the vulnerability (Critical, High, Moderate, or Low).

(t) Project Management Platform as per the Infrastructure RACI

(u) Enterprise Innovation Management as per the Infrastructure RACI

(v) CDAP Platform as per the Infrastructure RACI

(w) Oracle Identity and Access Management Platform as per the Infrastructure RACI

C.4.5.3 Ginnie Mae Customer Support / Centralized Service Desk

The Contractor must provide Tier 1 (as needed), Tier 2 and Tier 3 Help Desk Services using Ginnie Mae provided Help Desk software, Interactive Voice Response (IVR) systems and Tier 1 support agents. See *Table #1 Help Desk Definitions* below for the definition of each level of support.

Ginnie Mae will provide the ServiceNow Enterprise solution, with hosting in ServiceNow's FedRAMP cloud. The Contractor will be provided training on this tool including, but not limited to, how to: 1) provide resolutions to Cases, 2) initiate Change and Incident Requests when necessary, and 3) submit, update, and replace knowledge articles as needed. The Contractor will support establishing user profiles and workflows in the ServiceNow tool to ensure the proper

routing of assigned Cases. Future enhancements to the ServiceNow Customer Service Management (CSM) tool include, but are not limited to, Agent Chat, Virtual Agent, Self-Service Portal, Customer and Agent Knowledge Bases. The Contractor will support the implementation of these enhancements in the ServiceNow tool. As Ginnie Mae adds more functionality to the ServiceNow platform, the Contractor will receive the necessary training to be able to utilize this new functionality.

The Contractor must:

- (a) Establish a local number that will be linked to the central Ginnie Mae Customer Support number. This local number will need to be configured to receive Help Desk calls. This number must be established within the first 10 days after the TO award.
- (b) Provide Help Desk support for all applications and systems included in the *Task Five – Operations, Maintenance & Minor Enhancements*.
- (c) Maintain a local Help Desk number associated with the centralized Help Desk number (1-833-GNMA-HELP). The Ginnie Mae Customer Support number will direct callers to the appropriate contractors' number for agent support.
- (d) Provide subject matter expertise, technical assistance, and system and application support to Ginnie Mae staff, Issuers, Document Custodians, and other industry participants to support the Monthly Investor Reporting, Disclosure, and other MBS activities as defined throughout this PWS when contacted by participants in the Ginnie Mae program or prompted by the Centralized Service Desk. This includes the management of all types of inquiries (i.e., email, phone, website, MyGinnieMae, hard copy mail, etc.).
- (e) Create and update Knowledge Assets to assist Customer Service agents to meet quality standards and to assist program participants to conduct self-service. Customer Service Knowledge Assets are articles, training materials, or job aides such as help desk agent scripts, checklists, user guides, process flows, and other artifacts used to assist Customer Service agents providing customer service. Customer Service Knowledge Assets also include articles, training materials, or job aides such as Applications Quick Reference Cards used to assist program participant's or other interested parties to conduct self-service. Provide subject matter expertise to support Centralized Service Desk knowledge asset management.
- (f) Create, update and maintain Help Desk SOPs to ensure accuracy and reflect changes to business processes.
- (g) Track and monitor all program participant correspondence received for processing to support the Monthly Investor Reporting, Disclosure, and other MBS activities as defined throughout this PWS. This includes all phone inquiries, electronic correspondence, and all hard copy correspondence and documents received in the mail.
 - (1) Track the information for each correspondence including name, email and or phone

number, organization name/ID, nature of the correspondence, the type of documents received, when and how they are received, and what actions are taken to process each correspondence through resolution. Monitor adherence to any industry regulations, Ginnie Mae policies and procedures, and MBS Guide requirements.

- (h) Provide support personnel Monday through Friday, 8:00 a.m. to 7:00 p.m. EST. After hours phone calls will go to Voice Mail and will require processing the next workday.
- (i) Receive inquiries, address the inquiries and if necessary, escalate as appropriate to ensure timely resolution using the Customer Service Management module within ServiceNow. The Ginnie Mae Help Desk Manager will have oversight of open Cases and may direct the Contractor for appropriate action to resolve the Case. A Case is resolved when a customer accepts the proposed solution, the Case is closed by a Manager, or a required Change Request has been completed.
- (j) Mutually agreed upon CSM related SLAs will be established and updated throughout the period of performance of this TO. The ServiceNow CSM and IVR solution has recently been established and more data is required to establish SLAs.

Table #1 Help Desk Definitions

Help Desk Function	Definition
Tier 0:	Self-help and user retrieved information; if user is unable to resolve, user self-escalates to Tier 1.
Tier 1:	Support for basic customer service issues such as system usage problems or fulfilling service desk requests; if Tier 1 cannot resolve customer issue, agent escalates to Tier 2.
Tier 2:	Experienced and knowledgeable technicians assess issues and provide resolutions to more complex issues; for operational necessity, Tier 2 resolutions may be temporary workarounds to allow customers to conduct business; unresolved issues are escalated to Tier 3.
Tier 3:	Highly experienced technicians attempt to duplicate problems and define root causes; provides root cause analysis, advanced programmatic and configuration changes, and complex technical recommendations to the business for action. Issues unresolved at Tier 3 require outside support not provided by the organization.
Operations Administrator:	Operations Administrators have general oversight of the MyGinnieMae (MGM). They can only provide final acknowledgement of access requests and cannot make any changes to end user accounts. This function is provided by the MBSIBA Contractor on behalf of Ginnie Mae and in collaboration with Ginnie Mae Information Security serving as the Super Administrator over the entire system. The Operations

	Administrator has the responsibility to create, support and approve Organization Administrators.
Organization Administrator:	Organization Administrators have the privilege to invite end users to register for a MGM account, approve user registration, initiate access request via functional role assignment to user and approve the access request within a single organization. This function is provided by the MBSIBA Contractor on behalf of Ginnie Mae.

C.4.5.4 Disaster Recovery

Executive Order 12656 of February 1996, the Computer Security Act of 1987 and OMB Circular A-130 mandate that a disaster recovery plan for all U.S. Government information resources be maintained. In short, this contingency planning develops strategies for rapid recovery of mission critical information to enable Return to Operations of four (4) hours after the occurrence of a crisis or disaster. Ginnie Mae recognizes that the MBSOA Contractor's ability to return to operations within four (4) hours may be contingent upon other Ginnie Mae contractors such as the CAMO Contractor. For the purposes of this section, the four (4) hour window commences upon system availability. A list of the systems and applications subject to Disaster Recovery requirements is provided in *Attachment J: Disaster Recovery Requirements*. Ginnie Mae plans its semi-annual Disaster Recovery testing to be completed in April and October. If a pass is not received, additional testing is required until a pass is received. Testing dates may vary pending current deployment schedules, environment, system, and integrated team availability. Tests typically run for two days. The Contractor will need to coordinate and work with other Ginnie Mae Contractors to complete any DR test/drill.

The Contractor must:

- (a) Implement and maintain a detailed Disaster Recovery Plan that outlines the steps and communication strategy necessary to ensure that all work under the TO continues uninterrupted. This should include application and business operations.
 - (1) Evaluate existing disaster recovery configurations for applications managed under this TO. Ensure current configurations meet requirements. Ensure infrastructure deployments align with cloud resiliency capabilities.
 - (2) Establish, configure, and validate Disaster Recovery application environments for all applications as required.
 - (3) Document the Disaster Recovery Process for each managed application in the DR Plan.
- (b) Develop, implement and maintain Disaster Recovery Environment Validation processes and procedures. Automation of testing scripts is required.
- (c) Deliver the Disaster Recovery Plan within 30 days of project start. Update the Disaster

Recovery plan semi-annually with each Disaster Recovery test.

- (d) Develop and implement Disaster Recovery Testing processes and procedures that conform to all required federal mandates and guidance in addition to business requirements. Prior to implementation of the new Disaster Recovery Plan, the Contractor shall fully test and pass the Disaster Recovery Test according to NIST standards as required during the first six (6) months of the project start. Update and deliver the plan to Ginnie Mae during the term of this TO.
- (e) In the event of a disaster, resume and complete all business operations and processes for all day-to-day activities within four (4) hours following the disaster (the excusable delay).
- (f) Develop and perform a semi-annual testing of the disaster recovery plan, including the plan relating to the Ginnie Mae CAMO Contractor. Once complete, communicate the testing results and any deficiencies in the plan to Ginnie Mae no later than 10 days after semi-annual testing.
- (g) Provide support for quarterly environmental validation. The purpose of this is to ensure that changes and fixes to software and the environment that are implemented over the course of a year do not create problems and that any issues are remediated before the next disaster recovery test.
- (h) Participate in emergency drills.
- (i) Provide disaster recovery awareness training to Ginnie Mae business and IMD staff on a semi-annual basis.

C.4.5.5 Continuity of Operations

As established in Presidential Policy Directive 40 (PPD-40) “it is the policy of the United States to maintain a comprehensive and effective continuity capability through COOP, Continuity of Government (COG), and Enduring Constitutional Government (ECG) programs, ensuring the resilience and preservation of government structure under the United States Constitution and the continuous performance of National Essential Functions (NEFs) under all conditions.” While performing work the contractor’s peripherals and deliverables will be required to be in accordance with PPD-40, Federal Continuity Directives 1 and 2 (FCD), NIST and 800-34, 800-53, and 800-161.

The Contractor must:

- (a) Within 120 calendar days of task order start, the Contractor must, in conjunction with the client, analyze and determine what Contractor systems and operations support the Ginnie Mae Mission Essential Function(s) (MEF), Essential Supporting Activity(ies) (ESA), and Essential Supporting Task(s) (EST). The systems identified must meet or exceed the minimum Maximum Tolerable Downtime (MTD) / Recovery Time Objective (RTO) requirement noted in the most recent Business Process Analysis / Business Impact Analysis housed at Ginnie Mae and as determined by the methodology detailed in FCD-2.

- (b) Within 120 calendar days of task order start, for all systems and operations providing support to the Ginnie Mae MEF/ESA, provide all relevant information system documentation to include, but not limited to, a COOP Plan, Information Systems Contingency Plans (ISCP), SOPs, and POC.
- (c) Maintain required documentation, essential records and systems that support the Ginnie Mae MEF/ESA.
- (d) Resume business functions within four (4) hours of the event unless specified otherwise in the MEF/ESA operations within the MTD/RTO of each system identified supporting Ginnie Mae MEF/ESA.
- (e) Ensure that primary and alternate personnel maintaining and/or operating Ginnie Mae MEF/ESA support systems are available as “essential personnel” during an event that requires continuity support operations, for a minimum planning requirement of 30 calendar days, or longer as required by the definition of “extended operations”.
 - (1) Essential Personnel: defined as faculty and staff who are required to report to their designated work location, to ensure the operation of essential functions or departments during an emergency or when normal operations have been suspended.
 - (2) Extended Operations: Operations that go beyond the 30-calendar day minimum planning and generally involve the coordination and management of personnel and resources to mitigate an emergency and facilitate the transition to reconstitution operations.
- (f) Segregate and separately identify all costs incurred in continuing performance of essential services in a crisis. Requests for equitable adjustments will be handled in accordance with the applicable Changes clause(s).
- (g) Be required to be placed on the emergency notification service (ENS) database and other client-based contact rosters (such as an office specific “call tree”) related to emergency planning/notification.
- (h) Review, revise, and update all Ginnie Mae MEF/ESA support system documentation on an annual basis. For example, SOPs, plans and policies.
- (i) Participate in a maximum of five (5) training and/or exercise events per contract year to include at least one exercise event. The required exercise event is participation in the annual National Level Exercise/Eagle Horizon that specifically focuses on COOP operations and capabilities.
- (j) Report any real-world incidents/events that affect systems supporting Ginnie Mae MEF/ESA to the CO within MTD/RTO requirements and/or no later than 24 hours of incident.
 - (1) For exercise and real-world events that affect the systems supporting Ginnie Mae MEF/ESA, an after-action report (AAR) will be developed and provided to Ginnie Mae within 30 calendar days of the real-world event and/or exercise. The AAR will detail the following:
 - (i) An overview of the incident or event – What happened? How did it happen?
 - (ii) A detailed analysis – What was observed? What was expected? Who was involved?

What are the strengths? What are the opportunities? This is the longest and most detailed portion of the report.

- (iii) Recommendation – Detail ways to improve performance in the future.
- (iv) Improvement plan – Detail corrective actions to take for future occurrences. This will also list the party responsible for corrective actions.
- (v) Conclusion – Summary of the report.

C.4.6 TASK SIX – SYSTEMS SECURITY REQUIREMENTS ***(Estimated 8,783 hours per year)***

The Contractor must comply with all IT security and privacy for all in-scope applications, to include but not limited to: Application Security Assessment and Authorization (SA&A), privacy, risk analysis and mitigation, IT security and privacy baseline compliance, continuous monitoring, key escrow, audit, FOIA and e-Discovery requests, HSPD-12, forensic, breach/incident response, etc. The Contractor shall assist and characterize the threat to application environments and support development and implementation of effective countermeasures to protect and defend Ginnie Mae applications managed through this TO, maintaining the availability, confidentiality, and integrity of Ginnie Mae applications and information to support Ginnie Mae MBSOA operations.

The Contractor must:

- (a) Implement and document a program to identify, classify, and protect information associated with each application. The Contractor shall establish and document a process of change control and configuration management for adding, modifying, replacing, or removing security controls that impact applications, configuration management activities to identify, control and document all entity or contractor-related changes to applications or supporting application components which could impact the security of the platform. The Contract shall update annually.
- (b) Assist in the developing, implementation or integration of, operating, maintaining, and improving its application cybersecurity.
- (c) Assist Ginnie Mae in reviewing and enforcing key Cybersecurity controls defined under NIST SP 800 publications more importantly 800-171 (current and future revisions).
- (d) Review existing application cybersecurity capabilities adopted by CAMO, other Cloud Service Provider(s), and Ginnie Mae's Reference Architecture, supporting Ginnie Mae and assist in the: 1) Review, integration or implementation, support the operation and maintenance of additional application cybersecurity tools that increases or improves Ginnie Mae's application security capabilities and vulnerability management; 2) Reduce reaction time responding to and evaluating Application security incidents; 3) Collection and preservation of useful and meaningful application security data; 4) Provide input to a web-based, centralized tool, that visually represents the security posture of the Ginnie Mae

boundaries in real-time or near real-time; and 5) Propose third-party application cybersecurity monitoring tools or services and aid Ginnie Mae with the evaluation and selection.

- (e) Ensure data is provided to CAMO for the aggregation of relevant security data points from all relevant security tools and internal/external resources that produces intelligent report(s) or recommendations that will aid decision makers and stakeholders with their duties.
- (f) Participate in Ginnie Mae's forensics capability that will enable Ginnie Mae to effectively investigate any cyber related incident: The Contractor shall support:
 - (1) Data breach and security incident investigations due to, impacted by, or impacted from application cybersecurity incidents.
 - (2) Assist in the recovery and providing of data for examination.
 - (3) Assist in the dismantle and rebuild of damaged or impacted systems to retrieve lost data.
 - (4) Assist in the identification of additional systems/application components compromised by cyber-attacks.
 - (5) Assist in the compiling of evidence for legal cases.
 - (6) Assist in the drafting of technical reports, write declarations, and prepare evidence for trial
- (g) Document all processes and procedures both internally and externally that are related to the application security performance, operation, and interaction of the program.
- (h) Support CAMO for the validation of cybersecurity monitoring tool configuration, reporting, function, and compliance that supports the entire Ginnie Mae Information Technology (IT) Enterprise, infrastructure, and applications.
- (i) Support CAMO in the independent log collection, storage, and archival (3 years minimum) of security logs and relevant security meta-data.
- (j) Support CAMO in the creation of a strategy for dealing with specific targeted threat models like Insider Threat or DMZ compromise.
- (k) Support CAMO in performing security logs auditing weekly and as needed.
- (l) Abide by Federal Government and Ginnie Mae policies, procedures, standards, and directives.
- (m) Share expertise to other Ginnie Mae stakeholders as required in the matters of application Cybersecurity that will improve operational readiness of the IT Enterprise.
- (n) Provide appropriate Ginnie Mae stakeholders an independent application cybersecurity perspective as technology related projects, changes, and services are initiated, executed, and implemented.
- (o) Support CAMO in the development and implementation of Automated Cyber Security Capabilities that will impact applications or application performance. Impacted areas will include development, building, implementing, and operating automated systems that meet the following capabilities:
 - (1) Network Intrusion Detection, Prevention, and Analysis

- (2) Virus, Malware Detection and Prevention
- (3) Host-based End Point Protection
- (4) System and File Integrity Monitoring and Reporting
- (5) System and Network Vulnerability Scanning and Reporting
- (6) Centralized Patch Management and Reporting System
- (7) Centralized Host-based Intrusion, Detection and Prevention System
- (8) Centralized System and Network Log Aggregation, Correlation and Analysis
- (p) Support and participate in Computer Network Defense services provided by CAMO.
- (q) Provide on-going recommendations for mitigation of all threats and risks related to the in-scope applications and systems.
- (r) Assist in the mitigation of any risk, directly related to any new Government policies and/or initiatives that impacts the application Platform.
- (s) Participate in Plan of Action and Milestones (POA&M) remediation, vulnerability assessment and remediation, and incident response.
- (t) Interface with the Ginnie Mae IT Security and Privacy Team to assure proper understanding of security and privacy policies, processes, and operations. Participate in POA&M remediation meetings with the Ginnie Mae System Owners, Infrastructure Team, IT Development Team, and IT Developers to discuss remediation strategies, and other IT Security and Privacy related issues. POA&M is a management tool for tracking and mitigation of cyber security programs and system level findings/weaknesses.
- (u) Comply with and provide a monthly *IT Security Report* for supported application platform to include:
 - (1) Incident reporting comprised of a well-defined framework for the timely reporting of reportable cyber events or incidents. Reports shall provide an accurate, meaningful, and complete understanding of the incident from initial detection through analysis to resolution and closure.
 - (2) Reporting shall provide valuable input into the combined and coordinated analysis of data from a variety of sources.
 - (3) Analysis shall provide Ginnie Mae and/or other relevant stakeholders with indications of adversary reconnaissance, probing, intrusions, system, and network exploitations, and /or attacks that have occurred or are occurring on Ginnie Mae IT enterprise.
 - (4) Vulnerability scan reporting shall provide an accurate, meaningful, and complete understanding of the security posture of the Ginnie Mae IT enterprise. These reports are to be provided to Ginnie Mae at the very least one (1) time per month and/or as requested.
 - (5) Verification and Auditing: At Ginnie Mae's discretion all systems are to be available for verification and/or auditing without any interference. Relevant Ginnie Mae IT Staff shall have the ability to access, login, and perform verification and auditing of these systems and its information at any time.

- (6) Documentation and recommendation relating to all activities being performed related to Information Security Policy and Process within the first nine (9) months of the base year and updated annually.
- (v) Support SA&A activities and continuously monitor application compliance through the following:
 - (1) Provide information security guidance and technical assistance for all supported applications.
 - (2) Coordinate with Ginnie Mae Security Team in obtaining certification and accreditation of applications, risk assessment and remediation management.
 - (3) Provide innovations to improve application SA&A compliance and monitoring.
 - (4) Create SA&A artifacts including System Security Plans, System Categorization, System Boundary Diagrams, Network and Dataflow Diagrams, Risk Assessments, IT/IS Contingency Plans, Configuration Management Plans, Security Testing and Evaluation, Incident Response Plans, etc.
 - (i) System Categorization: FIPS 199 establishes security categories for both information and information systems. The security categories are based on the potential impact on an organization should certain events occur which jeopardize the information and information systems needed by the organization to accomplish its assigned mission, protect its assets, fulfill its legal responsibilities, maintain its day-to-day functions, and protect individuals. Security categories are to be used in conjunction with vulnerability and threat information in assessing the risk to an organization resulting from the operation of its information systems.
 - (ii) System Boundary Diagram: Detailed graphic layout of the system authorization boundary.
 - (iii) Network Diagram and Dataflow: A network diagram is a visual representation of network architecture. It maps out the structure of a network with a variety of different symbols and line connections. Data flow diagram (DFD) illustrates how data is processed by a system in terms of inputs and outputs. As its name indicates, its focus is on the flow of information, where data comes from, where it goes and how it gets stored.
 - (iv) Risk Assessment (RA): Risk assessments are used to identify, estimate, and prioritize risk to organizational operations (i.e., mission, functions, image, and reputation), organizational assets, individuals, other organizations, and the Nation, resulting from the operation and use of information systems.
 - (v) Configuration Management Plan (CMP): a comprehensive description of the roles, responsibilities, policies, and procedures that apply when managing the configuration of products and systems.
 - (vi) System Security Plan (SSP): Provides an overview of the security requirements of the system and describes the controls in place or planned for meeting those

requirements. The SSP also delineates responsibilities and expected behavior of all individuals who access the system.

- (vii) Information System Contingency Plan (ISCP): Provides established procedures for the assessment and recovery of a system following a system disruption. The ISCP provides key information needed for system recovery, including roles and responsibilities, inventory information, assessment procedures, detailed recovery procedures, and testing of a system.
 - (viii) Security Testing and Evaluation (ST&E): Documents the current state of the Major Application or the General Support System in accordance with FIPS 199, NIST SP 800-53 rev. 4, SP 800-37 rev. 1, SP 800-160 and OMB A130, A123, and FFMIA, and all future revisions.
 - (ix) Incident Response Plan (IRP): In accordance with NIST Special Publication 800-61 rev. 2, provide instructions for responding to a number of potential scenarios, including data breaches, denial of service/distributed denial of service attacks, firewall breaches, virus or malware outbreaks or insider threats.
- (5) Perform security scanning of all layers and remediate issues and prepare for independent testing and validation.
 - (6) Remediate and mitigate any open issues.
 - (7) Provide documentation relating to all activities being performed related to SA&A.
 - (8) Ensure application support for CAMO provided end point protection on all assets servicing supported applications.
 - (9) Support CAMO automated log management.

C.4.6.1 Federal Information Technology Security

- (a) The Contractor must maintain compliance with all current and future Federal IT security requirements, Executive Orders for Information Technology and Cyber Security, OMB Memorandums, DHS or CISA directives. The Contractor shall maintain IT security and comply with all terms and conditions of the TO with respect to all data and information technology requirements.
- (b) Use, maintain, enhance, develop, and upgrade all information technology, applications, software and system documentation under this TO in accordance with Federal Laws, best practices, and regulations. This includes, but is not limited to:
 - (1) Federal Information Security Management Act (FISMA) - <https://www.dhs.gov/fisma>
 - (2) The Clinger-Cohen Act - <https://www.fismacenter.com/Clinger%20Cohen.pdf>
 - (3) Government Paper Reduction Act - <http://www.hhs.gov/ocio/policy/collection/>
 - (4) Office of Management, and Budget Circulars A-130, A-I27, and A-I23 - and new directives. https://www.whitehouse.gov/omb/circulars_default
 - (5) HUD regulations, Handbooks and Policies - www.HUD.gov
 - (6) Applicable Ginnie Mae Handbooks and Policies now and in the future

www.ginniemae.gov

(7) GOA directives

(8) Federal Financial Manager Integrity Act (FFMIA)

https://obamawhitehouse.archives.gov/omb/financial_fmfi1982

- (c) Maintain SA&A standards in accordance with guidance published by NIST. An independent SA&A will be performed by Ginnie Mae during the period of performance of this TO. The Contractor must complete the SA&A within the first six (6) month time period after the award of the TO and again at the expiration of the SA&A and to include any revisions or updates.
- (d) Follow HUD's PPM Life Cycle and industry best practices in the analysis, design, development, testing and implementation of proposed new systems and/or the enhancement to existing systems.
- (e) Review and update system documentation to ensure accuracy, compliance, and completeness. Reviews and revisions to be completed and delivered to Ginnie Mae quarterly.
- (f) The Contractor will prepare its Security Plan as part of its demonstration that it meets the requirements for SA&A per the applicable requirements from HUD, OMB, NIST, etc., which will require the preparation of several related documents, including but not limited to:
 - (1) FIPS 199/200 Security Categorization Analysis;
 - (2) SP-800 Security Controls Self-Assessment;
 - (3) Application and network vulnerability scans;
 - (4) Business Impact Assessment;
 - (5) Privacy Impact Assessment;
 - (6) Create System Security Plan, Risk Assessment, Technical Architecture, COOP and Contingency Plans, Quality Control Plan, ST&E Plan, and other relevant SA&A supporting documentation for each new application;
 - (7) (Security Assessment Reports) (formerly ST&E Testing)
 - (8) (Security Assessment Reports) (formerly ST&E Report);
 - (9) POA&M's; and
 - (10) Accreditation Documentation
- (g) Each mixed or financial system that the Contractor manages, develops, modifies, enhances, releases and/or upgrades will be assessed under the Federal Information System Controls Audit Manual (FISCAM) methodology that include control families for both General Computer and Business Process Application controls:
 - (1) General Controls
 - (i) Security Management
 - (ii) Access Controls
 - (iii) Configuration Management
 - (iv) Segregation of Duties
 - (v) Contingency Planning

- (2) Business Process Application Controls:
 - (i) Application Security
 - (ii) Business Process Controls
 - (iii) Interfaces
 - (iv) Data Management
- (h) Each mixed or financial system that the Contractor manages, develops, modifies, enhances, releases and/or upgrades must comply with identified OMB A-123 Appendix A. "Management's Responsibility for Internal Control", and Appendix D (Compliance with the Federal Financial Management Improvement Act of 1996) key controls; and the Federal Information Security Management Act of 2002 (FISMA) to include:
 - (1) National Institute of Standards and Technology Special Publication (SP) 800-53, Security and Privacy Controls for Federal Information Systems and Organizations, (Currently NIST SP 800-53, Rev. 5);
 - (2) NIST SP 800-18– Guide for Developing Security Plans for Federal Information Systems;
 - (3) NIST SP 800-23 – Guidelines to Federal Organizations on Security Assurance and Acquisition/Use of Tested/Evaluated Products;
 - (4) NIST SP 800-30– Guide for Conducting Risk Assessments;
 - (5) NIST SP 800-34– Contingency Planning Guide for Federal Information Systems;
 - (6) NIST SP 800-37 Rev. 1 – Guide for Applying the Risk Management Framework to Federal Information Systems;
 - (7) NIST SP 800-47 – Security Guide for Interconnecting Information Technology Systems
 - (8) NIST SP 800-53A– Guide for Assessing the Security Controls in Federal Information Systems and Organizations, Building Effective Security Assessment Plans;
 - (9) NIST SP 800-59 – Guideline for Identifying an Information System as a National Security System;
 - (10) NIST SP 800-60– Guide for Mapping Types of Information and Information Systems to Security Categories;
 - (11) NIST SP 800-84 – Guide to Test, Training, and Exercise Programs for IT Plans and Capabilities;
 - (12) Federal Information Processing Standards (FIPS) 199/200 – Security Categorization Analysis; and
 - (13) FIPS 191 – Guideline for the Analysis of Local Area Network Security.
- (i) Ginnie Mae’s OER will have responsibility for maintaining the FISCAM-based mapping of security controls that will be required in order to maintain compliance with FISMA, OMB A-123, HUD, and Ginnie Mae security requirements.
 - (1) The Contractor shall support and provide system security to ensure availability, confidentiality, and integrity of the Ginnie Mae data applications (e.g., maintaining

access control, user identification, password protection and authentication, confidentiality of customer profiles and traffic, physical and personnel security required under this TO). Provide SA&A support, including potential off cycle or unanticipated SA&A support, over the life of the TO.

- (j) The Ginnie Mae System Security Plans (Risk Assessment, Incident Response Plan, and IT Contingency Plan) shall be reviewed and presented to Ginnie Mae's Chief Information Security Officer for approval.
- (k) Annual Security Self-Assessment Reporting
The Contractor shall provide and present to the Ginnie Mae's CISO on an annual basis, a Security Self-Assessment Report, the report is due no later than August 31st of each calendar year.
- (l) Monthly and Quarterly Plans of Action & Milestones
Monthly and quarterly, the Contractor shall review and update POA&M and present it to the Ginnie Mae CISO for review and approval. All findings will remain on POA&M reports until mitigated and resolved.
- (m) Failure to adhere to the above NIST requirements could result in penalties, to include a contract performance stop-work order until compliance can be demonstrated. Disregard of these NIST requirements could also lead to other criminal, civil, administrative, or contract penalties, including:
 - Breach of Contract damages
 - False Claims Act damages
 - Liquidated Damages
 - Termination for Default
 - Termination for Convenience
 - Poor Past Performance
 - Suspension/debarment

C.4.6.2 Federal Information Systems Controls Audit Manual (FISCAM), OMB A-123 And Other Audit Support

- (a) Ginnie Mae is subject to annual financial and systems related audits and reviews to include the OIG, FISCAM, OMB A-123 and other audits and reviews. Expertise and experience with FISCAM, OMB A-123 and other Government Audit requirements and standards is an important component of this PWS. Ginnie Mae will have responsibility for maintaining the FISCAM-based mapping of security controls that will be required in order to maintain compliance with FISMA, OMB A-123, HUD, and Ginnie Mae security requirements.

The Contractor must:

- (1) On a quarterly basis, provide expertise and assistance in mapping and identifying and

remediating controls relevant to the activities performed under this TO.

- (2) Deliver a FISMA compliance assessment within one hundred and twenty days (120) of TO start date and update annually.
- (3) Provide access to auditors and provide expertise and assistance to Ginnie Mae in respect to OIG, FISCAM and other reviews and audits. Support may include onsite meetings and review of documents and deliveries.

- (b) Each mixed, financial system and FISMA system that the Contractor operates, develops, modifies, enhances, releases and/or upgrades must comply with identified OMB A-123 Appendix A. "Management's Responsibility for Internal Control", and Appendix D (Compliance with the Federal Financial Management Improvement Act of 1996) key controls; and the FISMA as described in *Section C.4.6.1 Federal Information Technology Security*.

The Contractor must:

- (1) Provide expertise and assistance in assessing, identifying, and remediating controls relevant to the activities performed under this TO.
- (2) Provide access to auditors and provide expertise and assistance to Ginnie Mae in respect to OMB A-123 and any other audits and reviews.

C.4.7 TASK SEVEN – ENHANCEMENTS, INTEGRATED SOFTWARE DEVELOPMENT AND TRANSFORMATION INITIATIVES SUPPORT (OPTIONAL) *(Estimated 68,040 hours per year)*

C.4.7.1 Corrective, Adaptive, and Other Major Enhancements Greater than the 500 Hours Threshold

(a) Overview

Ginnie Mae is in the midst of a multi-year, multi-phase initiative to transform and modernize its Securitization Platform, systems, and business processes. The purpose of this initiative is to support the major growth in Ginnie Mae's MBS programs with increased transparency, improved service, new capabilities for our Issuers, investors, and employees and to optimize back-office efficiencies as well as prepare for a path forward with our Cloud IT Services strategy and smarter approaches to development and delivery. Ginnie Mae is currently developing and implementing new securitization products and services and upgrading application and IT infrastructure as part of this initiative.

Ginnie Mae is in the planning stages of a new forward-thinking program called Next Generation, or in short, NextGen. The NextGen effort is an outgrowth of administrative reforms recommended in the 2019 HUD Housing Finance Reform Plan, most importantly the

directive to:

- Transition the MBS platform from pool level to loan level functionality, including the ability to transfer servicing of individual loans within a pool.
- Strengthen risk management analytics and predictive capabilities.
- Fully modernize platform access, data standards, collection, and storage.

In response to these reforms, Ginnie Mae is leveraging best practices and lessons learned in its Modernization Program and is planning a bolder, bigger picture thinking path forward with the vision to serve Ginnie Mae for another three to five decades. It will pivot its Modernization Program to a more transformative NextGen one. The NextGen vision will transform Ginnie Mae's business solutions delivery through innovative and agile business practices and technological advances and deliver greater value to existing customers, partners, internal stakeholders, and our housing finance ecosystem participants. Ginnie Mae's vision is for NextGen to accomplish the following:

- Be an operational and technology platform that meets or exceeds digital parity with the industry ecosystem.
- Have architecture and technology designs that are agile, modular, and flexible.
- Have more data centric, data driven decision making capabilities.
- Enable leaner, more streamlined, and efficient business processing.
- Identify considerations to better position for an innovative workforce plan for the future.

NextGen will also facilitate new and enhanced partnerships across our ecosystem facilitating more value delivery. NextGen's more flexible and adaptable data and technology architecture will enable operational efficiency, improve CX, and allow Ginnie Mae to better manage its counterparty risk.

Our on-going Modernization and NextGen programs are anticipated to converge into one roadmap and designs in 2022. NextGen is expected to be a five to seven-year program.

(b) Major Enhancements

The role of the MBSOA Contractor in supporting Ginnie Mae's transformation and modernization initiatives will primarily focus on integration, corrective, adaptive and other Major Enhancement work required in the legacy applications described and transitioned in this TO. The Contractor shall assist in the development of new technology solutions or enhancements to existing infrastructure as determined by Ginnie Mae. Additional roles include but are not limited to subject matter expertise and consulting to support Ginnie Mae management and transformation Integrated Project development teams such as NextGen; developing and vetting requirements; educating the software development contractor teams;

creating reports and data sets necessary to perform testing and validation; sharing and leveraging existing code to streamline requirements; supporting testing during development and during parallel testing; attending Integrated Project Team meetings; and integration, coordination, and production validation services needed to complete Major Enhancements. The Government estimates that it will require 12 to 16 Major Enhancements per year.

(c) Types of Projects

The Contractor shall provide services to change, modify, upgrade, or enhance existing applications, systems, databases, and application infrastructure to include but not limited to the following types of Enhancement projects including any related to NextGen and other transformation initiatives:

- (1) Regulatory mandates, agency policy and mortgage industry standard changes.
- (2) New or enhanced analytics and risk reporting.
- (3) Enhancements to improve risk analysis capabilities.
- (4) New products, services, and business process changes.
- (5) Software and hardware changes to improve capability or performance.
- (6) Application infrastructure and enterprise architecture changes.
- (7) Integration of new systems or applications with legacy systems (except when the integration can reasonably be accomplished utilizing the same skillsets and staff as described in *Task Five - Operations, Maintenance & Minor Enhancements*).
- (8) Data disclosure development.
- (9) Coordination with Ginnie Mae's Software Development Contractors and others to support Ginnie Mae's securitization platform modernization and transformation software development initiatives including NextGen and other transformation initiatives.
- (10) Modernized system availability, resiliency, and DR.

(d) Agile and DevSecOps Approach

Ginnie Mae is positioned to adapt Agile and DevSecOps software development culture and practices to meet the changing business process automation demands and to enable business operations resilience. In the high-speed modern business landscape, agility means the difference between a competitive organization and an outpaced relic. Agile software development is a method of software development management that utilizes an iterative and incremental development process, user needs driven design of services, and improvement of software resulting from prompt user feedback. DevSecOps is a modern software development and delivery practice that not only breaks the traditional method of silo development, operations, and security teams but also introduces a philosophy and culture change to enable organizations for rapid software delivery through automation of continuous integration, security left-shift, automated testing and continuous deployment known as CI/CD pipeline automation. By adoption of Agile and DevSecOps, Ginnie Mae can proactively anticipate, rather than simply respond to, data security incidents and demonstrate quality and security improvements via shorter mean time to production, faster deployment

speed, increased deployment frequency and faster mean time to recovery.

While the traditional waterfall SDLC methodology remains to support the HUD PPM 2.0 guidelines for legacy systems, the Contractor shall follow Ginnie Mae's Agile and DevSecOps guidelines and principles when conducting software development and enhancements. The Contractor shall ensure the agile software development Product Team has adequate skills and resources such as experienced and certified Scrum Master and DevOps/DevSecOps engineer for Agile and DevSecOps practices in addition to the traditional software development team. The Contractor agile software development Product Team shall include diverse levels of expertise for SDLC activities such as developing user stories and user acceptance criteria, architecture, designing, coding, testing, and quality acceptance. The Contractor Product teams shall embrace a collaborative culture and work closely with product owners, information security and operations teams throughout the DevSecOps CI/CD pipeline and agile delivery. The Contractor Product Teams shall leverage Ginnie Mae's standard DevSecOps automation shared services, tools, and mandatory security scanning policy for building the product CI/CD pipelines. The use of any new tools must go through the new tool adoption approval process before being used in Ginnie Mae's non-production and production environments. User stories and user acceptance criteria must be approved by Ginnie Mae's product owner or product owners. Sprint ceremonies must be conducted based on best practices and sprint-based product demonstration shall be provided to product owners and end users for obtaining feedback.

The tools listed below are some of the currently used Agile/DevSecOps tools at Ginnie Mae. Our toolchain strategy for hyper automation is starting from MVP (minimal viable product) and gradually evolving to more comprehensive robust CI/CD automations as shared services with standardized templates in the AWS GovCloud ecosystems environment to meet the automation and collaboration needs for development, security, operations, and governance teams.

- Jira
- ServiceNow
- Planview
- Terraform
- Ansible
- GitLab
- Jenkins
- Junit
- Selenium
- SonarQube

- Maven
- Splunk
- Docker/Container
- MS Teams

The Contractor's lead Scrum Master and DevSecOps Engineer shall participate in Ginnie Mae's DevSecOps and Agile Center of Excellence (CoE) activities to receive updates on Ginnie Mae's Agile and DevSecOps practice guidelines, policies, procedures, toolchain standards as well as to have an opportunity to share your industry best practices and lessons learned with others within the CoE.

(e) Requirements, Design and Development

The Contractor shall provide the following Enhancement functions:

- (1) Perform analysis, requirements definition, technical design, development, testing, Quality Assurance (QA) and implementation for modifications and enhancements to existing systems.
- (2) Perform analysis, requirements definition, technical design, development, testing, QA, and implementation for integrating new systems or applications with legacy systems.
- (3) Upgrade or implement new technologies to support existing or new programs and products.
- (4) Provide and implement hardware and software upgrades to support new and ongoing business needs.
- (5) Ensure the modifications and enhancements are aligned with Ginnie Mae's Enterprise Architecture (EA) during all development.
- (6) Coordinate all Enhancement projects through the COR and Ginnie Mae's Project Management Office (PMO), Project Managers, Architecture Review Board (ARB) and Change Control Board (CCB).
- (7) Update all relevant system documentation to include but not limited to required PPM documentation, Security related documentation, all related manuals, operating procedures, and the Reference Architecture.

(f) Project Management

- (1) Perform services in accordance with HUD's latest PPM methodology as adapted and tailored by Ginnie Mae. The Contractor shall be well versed and experienced in agile project management and the agile software development life cycle and perform services in accordance with agile industry best practices.
- (2) Perform requirements and benefits analysis for each enhancement as required to support business case development.
- (3) Provide a Project Plan covering all phases of the project as defined by the PPM.
- (4) Track, monitor and manage the project budget, the project schedule, project dependencies, project risks and issues and overall project performance. Communicate the

- project status to the COR and TPOC in writing.
- (5) As part of the PPM process, participate in PMO Control Gate Reviews or other technical project reviews as requested by the TPOC.
 - (6) Perform all project management activities in accordance with industry best practices for IT development, upgrades, and enhancements.
- (g) Quality and Testing
- (1) Practice rigorous requirements management, project management, change control management, quality assurance and testing to ensure:
 - (i) Deployment of high-quality code that accurately meets the requirements.
 - (ii) Successful releases without introduction of unexpected problems.
 - (iii) Minimal need for emergency/corrective maintenance.
 - (iv) Minimal need to fix the same issue multiple times.
 - (v) Maximum value out of limited IT budget resources.
 - (2) Design and develop test plans for each enhancement following Ginnie Mae's testing policies and SOPs to include Ginnie Mae User Acceptance Testing (UAT).
 - (3) Provide test reports and test results to the TPOC.
- (h) Materials Documentation and User Training
- (1) Develop O&M manuals, user manuals, training manuals and other related documentation. Update all O&M manuals, user, and training manuals, as well as on-line help and technical documents at least annually and as required due to system upgrades/changes. Ensure that user documentation is easily understood.
 - (2) Prepare and provide all documentation and artifacts required by HUD's PPM for any enhancements, upgrades, or modifications.
 - (3) PPM Documentation: Maintain documentation in Ginnie Mae's document repository (currently Planview) for posting and sharing of documents such as approved Work Requests, prototyped screens, PPM documents, etc. for simplified collaboration with Ginnie Mae's PMO and other integrated team members.
 - (4) Database Documentation: Update data models and data dictionary to ensure that the documentation of the database for systems matches the structure of the database.
 - (5) Technical Advisory Analysis Reporting: Fulfill technical advisory analysis requests for data and data research.
 - (6) Customer Adoption Materials and support: Support customer adoption activities and train system and application users.
- (i) Compliance
- (1) Comply with IT security requirements and all terms and conditions of the TO with respect to all data and information technology requirements as outlined in *Section C.4.6 Task Six – Systems Security Requirements*.
 - (2) Copy of SEI CMMI Level III Certificate for Development: Within 30 days of TO start date, but before the commencement of any major enhancements, provide the TPOC a

copy of the Software Engineering Institute (SEI) CMMI certificate, upon completion of the independent assessment, which demonstrates at least Level III certification. Maintain the SEI CMMI Level III requirement for the remaining life of the TO.

- (3) Provide, operate, and maintain internal baseline control and change management tools and systems, processes, and procedures in a manner consistent with HUD's PPM, as implemented by Ginnie Mae, and the Contractor's CMMI Level III certification methodologies.
- (4) Contractor shall demonstrate the utilization of the CMMI Level III (Development) processes in the Ginnie Mae environment in an Annual CMMI report.

(j) Status Reporting

- (1) Provide in writing, a monthly Development, Modification, and Enhancement of Information Technology status report to the TPOC. The report shall include:
 - (i) Description of work accomplished during the billing period;
 - (ii) The stage of completion for each key activity, action, initiative, or project;
 - (iii) Remaining work to be completed, the expected completion date in accordance with any contractually established schedule dates;
 - (iv) The number of labor hours expended to date per labor category;
 - (v) The associated cost for each action, activity, initiative, and projections for project expenditures for the next month. In the event that multiple initiatives or projects are performed and invoiced under the same CLIN, provide sufficient detail to identify the resources and costs used to support each project.

C.4.7.2 Integrated Software Development and Transformation Initiatives Support

(a) Background

As part of Ginnie Mae's Securitization Platform transformation initiatives, the MBSOA will support Ginnie Mae in working with its integrated Software Development Contractors.

In July 2019, Ginnie Mae awarded an Information Technology Services Multiple Award BPA to four (4) Contractors to provide Securitization Platform modernization and transformation initiative software development services on a task order basis. Any major software development identified as part of Ginnie Mae's transformation initiatives including the NextGen program is anticipated to be tasked through the Software Development BPA or other related contracts and be supported by the MBSOA Contractor.

For new major software development and transformation initiatives such as NextGen, the Contractor will be required to work with and support Ginnie Mae's Software Development Contractors and other Ginnie Mae business partners, such as the MBSIBA Contractor, the CAMO Contractor, as required, to deploy new or enhanced applications into the MBSOA's

application environment.

Ginnie Mae anticipates completing three (3) to five (5) projects per year.

- (b) When ordered by the CO, the Contractor shall provide this work according to the requirements of the specific tasking:
- (1) Provide the technical and collaborative skills necessary to operate as part of an IPT.
 - (2) Work closely with Ginnie Mae's development teams who are contracted to perform Major Enhancements/new development on Ginnie Mae's behalf to ensure proactive engagement for transitioning and implementing the new or enhanced applications into the MBSOA application production environment.
 - (3) Participate in relevant stages of HUD's PPM lifecycle. Provide comments on HUD PPM deliveries.
 - (4) Participate in education and planning sessions with Ginnie Mae and the Software Development Contractor, MBSIBA and the CAMO Contractor to gain background knowledge of the existing Ginnie Mae environment, applications, and key business processes.
 - (5) Assist the Software Development Contractor to understand the current state of the software, application, or system they are working to modernize or transform.
 - (6) Assist the Software Development Contractor to define the solution, application or systems end state.
 - (7) Assist the Software Development Contractor to integrate the new or enhanced applications with the existing systems and applications covered by this TO.
 - (8) Provide testing. The code will be migrated through development (DEV), System Integration Testing (SIT), and UAT environments for validation and testing cycles and ultimately be released to production (PROD). The Contractor will have to work with the Software Development Contractor and CAMO Contractor as migration of code to SIT and UAT occurs and preparation for PROD release. At times this might also include parallel processing testing and business validation services. Specific testing requirements will depend on the project and the applications and business processes impacted by the project.
 - (9) Participate in SA&A, ST&E or other validation services.
 - (10) Support the rollout of new applications and systems to end users.
 - (11) Once it is in production, assume responsibility for the O&M of new applications and systems.

C.4.7.3 Capitalization Reporting

The Contractor must provide monthly Capitalization Reporting as defined by Ginnie Mae as

applicable per each enhancement. *See Attachment K: Vendor Capitalization Cost Reporting.* The Contractor shall use the following documents for determining capitalizable costs: Ginnie Mae OCFO Internal Use Software and Hardware Policy which describes the Ginnie Mae policy guidance for capitalizable costs and the HUD PPM 2.0 Capitalization Matrix which aligns the HUD PPM 2.0 activities to the Ginnie Mae Policy.

C.4.8 TASK EIGHT – TESTING AND MIGRATION ACTIVITIES (OPTIONAL) ***(Estimated 13,680 hours per year)***

The Contractor must provide testing, parallel processing, participate in SA&A, Security Test and Evaluation (ST&E), and/or other validation services when this optional CLIN is exercised in writing by the CO.

(a) Example 1- Infrastructure Consolidation Migration Support

During the first six (6) months of the project start, Ginnie Mae may require the Contractor to support the migration of existing applications from the ITIC Provider to the CAMO Contractor's AWS GovCloud. The Contractor shall work with Ginnie Mae, the ITIC Provider and the CAMO Contractor to support migration operations including testing and parallel processing for the MBSOA applications. The objective is to ensure that the Contractor and Ginnie Mae have performed validation activities and are confident that the transitions of major and minor applications and mission critical processes have been migrated successfully. This will ensure the new environment is "production ready."

(b) Example 2 – Decommission of MBSOA related applications hosted at the ITIC Provider:

In 2023, the Contractor shall assist Ginnie Mae in decommissioning any MBSOA applications, software and related infrastructure hosted at the ITIC Provider as part of completing the migration of the MBSOA application hosting from the ITIC Provider to the CAMO Contractor.

(c) Example 3 – SA&A and Security Testing and Evaluation Support

Ginnie Mae may require support for developing the SA&A packages that would include the development of some or all SA&A artifacts, performing security scanning or vulnerability remediation, and/or evaluating the security solution for the migrated applications that are considered within the scope of this optional CLIN as deemed necessary by Ginnie Mae and in accordance with task C.4.6 of the TO.

C.4.9 TASK NINE – CUSTOMER EXPERIENCE (CX): CUSTOMER ADOPTION, TRAININGS & CONFERENCES (OPTIONAL) ***(Estimated 5,040 hours per year)***

C.4.9.1 CX: Trainings & Conferences

Ginnie Mae requires the assistance of the Contractor for training and conference support, and

technical assistance services. Ginnie Mae requires the assistance of the Contractor when hosting or participating in conferences. Training is typically related to program participants or Ginnie Mae staff. Ginnie Mae conducts training sessions to educate program participants on the policy, mechanics, systems, and business processes associated with their pool processing and reporting obligations. Ginnie Mae normally conducts four (4) to five (5) trainings, and would not exceed ten (10) trainings, per year. Training sessions typically last two (2) to five (5) days each. In addition, the Contractor may be asked to develop and provide materials support for up to four (4) to five (5) conference events per year. Ginnie Mae also conducts training to external stakeholders to educate them on changes and updates to business processes and customer applications as a result of new system functionality and capabilities.

The Contractor must:

- (a) Assist Ginnie Mae with the planning, logistics, and delivery of program participant training and outreach conference calls, webinars, videos, presentations and other outreach and training activities. This includes preparing presentations and developing content to meet Ginnie Mae's business and operational needs.
 - (1) For training webinars, coordinate the planning and logistics for each approved activity, including the setup and hosting of events using the Ginnie Mae preferred technology solution. Provide Ginnie Mae a list of all participants, the questions asked by participants, and survey results (if a survey is conducted during or following the call, as directed by Ginnie Mae).
 - (2) Prepare presentations and other content in support of each approved training and outreach conference call, webinar, presentation or other outreach and training activity. Provide final training materials that have been reviewed and approved by Ginnie Mae no less than two (2) weeks before the start of training.
 - (3) Research and review the MBS Guide, APMs, and related materials in support of training and outreach objectives and content development. Leverage and update existing training material and work with Ginnie Mae to review and finalize the content.
 - (4) When needed, coordinate printing and shipping of training materials (including presentation binders, appendices, feedback forms, and other collateral documents) to be distributed to training participants.
- (b) Attend and provide onsite or virtual training coordination and support of Issuer training sessions to be held in four (4) different locations (identified by Ginnie Mae) in the United States.
 - (1) Training and Technical Support: In conjunction with the requirements identified above, the MBSOA Contractor will assist Ginnie Mae with in-person training activities as follows:

- (i) To the extent directed by Ginnie Mae, travel to the training location, provide training and WebEx/conference call capability and support for offsite Issuer participation, and answer participant questions. Contractor travel for Conference and Training will be reimbursed in accordance with Federal Travel regulations.
 - (ii) Provide an event schedule in advance of training/conference events.
 - (iii) Conduct training and answer participant questions.
- (2) Reporting Requirements and Quality Assurance: Within 10 workdays after the training delivery, the Contractor shall participate in a post training phone call to discuss the training materials and delivery as well as participant feedback. Ginnie Mae will provide the participant feedback within eight days of the training.

C.4.9.2 Customer Experience (CX): Adoption & Program Support

Ginnie Mae requires the assistance of the Contractor for CX program support and the management of customer adoption for new technology and processes. Ginnie Mae requires assistance in developing, updating, and executing a CX strategy on behalf of the enterprise. Strategy development requires collection and synthesis of metrics, customer journeys, and business processes to produce a plan for ongoing innovations and improvements. Ginnie Mae also requires assistance in the customer adoption of applications when releasing a new system or enhancing functionality of an existing system or technology. Customer adoption requires tracking, training, and triaging customers, development and management of outreach and communications for internal and external audiences, and overall project management of the effort of the customer adoption program.

The Contractor must:

- (a) Assist Ginnie Mae in developing, updating, and executing a CX strategy on behalf of the enterprise. Strategy development requires collection and synthesis of metrics, customer journeys, and business processes to produce a plan for ongoing innovations and improvements.
 - (1) Strategy development includes gathering Ginnie Mae priorities from existing strategic documents, as well as collecting key stakeholder inputs to develop a detailed plan with targets, measures, and actionable items that advance Ginnie Mae's priorities and connect resources in a format that is strategic and trackable.
 - (2) Journey Mapping includes maintaining momentum on existing customer mapping and engaging two (2) to six (6) customer segments each year to better understand their needs and identify improvement opportunities around the Ginnie Mae website, data, processes, and systems.
 - (3) Collection of metrics includes implementing six (6) to ten (10) surveys annually to the

Ginnie Mae customer base to gather the Voice of the Customer (VoC) and tracking CX metrics to drive performance.

- (i) Baseline surveys and metrics will be required in areas that do not have existing data and measures to establish a baseline measure of the CX.
- (ii) Ongoing data and feedback collection and analysis of customer information will be required along with the development and maintenance of CX dashboards to track progress and identify opportunities to improve the CX.
- (4) Manage the business analysis and development of requirements for updates to business processes with procedural and technology changes to enhance the efficiency and clarity of business transactions for customers.
- (5) Work with applicable Ginnie Mae and business partner stakeholders to develop governance and standardization of repetitive processes which impact customers for the purpose of testing, releasing, and enhancing Ginnie Mae business processes and systems.
- (b) Assist Ginnie Mae in the customer adoption of applications when releasing a new system or enhancing functionality of an existing system or technology. Ginnie Mae normally manages one (1) to two (2) major or high, three (3) to five (5) medium, and seven (7) to ten (10) low-level customer adoption efforts each year. Customer adoption requires tracking, training, and triaging customers, development and management of outreach and communications for internal and external audiences, and overall project management of the customer adoption program.
 - (1) Tracking, training, and triaging customers includes gathering data and information from Ginnie Mae customers and business systems to provide a clear understanding of the customer landscape and their readiness to adopt changes. It also includes assisting the Ginnie Mae Customer Support / Centralized Service Desk in triaging customers throughout the lifecycle preparing for and releasing new technology and program changes. This includes preparing and or reviewing user materials, adoption tools, and Service Desk articles to assist customers, as well as planning, coordinating, and sometimes delivering training and outreach to customers regarding changes.
 - (2) Development and management of communications and outreach includes providing the necessary support to draft and review Ginnie Mae communications for technical accuracy and consistency with established Ginnie Mae templates and guidelines.
 - (3) Project Management may be required for projects, enhancements, and other changes which will require development and management of detailed project schedules. This will also include managing and responding to any applicable governance requirements, providing weekly status reports as required by the governance bodies, and participating in relevant meetings.

C.4.10 TASK TEN – SPECIALIZED ANALYTICS, CONSULTATION, AND PROJECT SUPPORT (OPTIONAL)

(Estimated 33,580 hours per year)

Ginnie Mae may require assistance for specialized projects related to Ginnie Mae's operations in the mortgage banking industry, insuring agencies' operations, GSEs operations, and other mortgage industry players. These specialized projects require the Contractor to have considerable subject matter expertise as well as demonstrated knowledge to assist Ginnie Mae as an enterprise. Ten (10) to fourteen (14) specialized projects are expected each year of varying size and complexity. The Contractor shall perform or assist Ginnie Mae in specialized projects to include the following:

(a) Unique Information

Requests for specialized and unique information that requires in-depth mathematical, modeling, research, and analysis. Conduct sensitivity analysis and modeling to enhance the risk analysis.

(1) As an illustrative example, the Contractor may be asked to provide a statistical analysis of a present or future variable in the CW Issuer Risk Grade Model. The analysis would describe the impact and make recommendations for inclusion/exclusion of the variable in a multifactor risk model, perhaps using a regression methodology.

(b) Expert Advice

Review and provide expert advice to Ginnie Mae in introducing new programs, products, business rules, and requirements relating to the data collection and risk analysis functions in this TO. Provide special analysis on emerging regulations, regulatory mandates or existing regulations impacting Ginnie Mae.

(c) Corporate Watch Analysis

Utilizing CW information and industry research, the Contractor shall perform market segment analysis of Issuers' corporate performance with the program.

(1) As an illustrative example, the Contractor may be asked to provide an analysis, insights, and commentary of the middle market, non-depository segment of the Issuer base that explains profitability in a particular quarter (analysis of revenues, analysis of expenses, analysis of net income, analysis of adjusted income (i.e., EBITDA), analysis of industry standard profitability metrics, plus commentary on marketplace situations that may have explained the segment's performance. The form of delivery would be a Microsoft PowerPoint file along with a supporting data file in Excel.

(d) Specialized Analysis

Provide specialized analysis on Ginnie Mae's programs, portfolio, and Issuers. This specialized analysis includes impact analysis on changes or potential changes to Ginnie Mae's programs. In addition, the Contractor will need skill sets to support the review and analysis of changes to existing regulations and potential new regulations that impact Ginnie Mae from banking, trade, GSEs and Presidential initiatives.

- (1) Example: The Contractor shall track, review, and analyze all relevant changes to existing regulations and new regulations and provide an assessment of the potential impact on Ginnie Mae, its Issuers, vendors, and key constituencies. The impact assessment should include, but is not limited to, the impact on Ginnie Mae's mission, goals, competing priorities, volumes, operations, Issuer risk profile, program compatibility, and overall program risk, and should include an estimate of the required investment and costs needed for Ginnie Mae to support the change or new regulation (e.g., staffing and systems changes). Perform necessary research, including program and data research, as required to complete the assessment.
 - (2) Examples of Analysis: The Contractor shall analyze changes to FDIC default procedures, regulations specifying new CFPB enforcement practices, and guidance on the existing position of the OCC on third party loan origination.
 - (3) Examples of Agencies and Related: The Contractor shall research and analyze issues related to the FDIC, OCC, Board of Governors of the Federal Reserve System (Federal Reserve), Securities Industry and Financial Markets Association (SIFMA) pooling parameters, Basel Committee on banking Supervision (Basel Committee), and Conference of State Bank Supervisors (CSBS)/Consumer Financial Protection Bureau (CFPB) decisions.
 - (4) Example of Pass-Through Assistance Program (PTAP) COVID type analysis / reporting capabilities as events arise in the economy: For example, the Contractor shall provide support in operationalizing approved procedures for determining if an Issuer truly needs Ginnie Mae Pass-Through assistance. This includes providing tools to assess the Issuer's eligibility to remain in the PTAP on a monthly basis. The Contractor shall collect and review for completeness participating Issuer's monthly submission of interim financial information for credit risk analysis. Identify and request missing data if applicable; run financial data through a risk model to support credit risk analysis and assessment of Issuer's ability to repay Credit Facility to support Ginnie Mae with decision on eligibility for continued participation in PTAP and provide credit risk analysis support for a Pass-Through Assistance Recommendation Memo.
 - (5) Examples of Analysis: The Contractor shall analyze Ginnie Mae's financial requirements for issuers relative to capital and liquidity requirements published by the Federal Reserve and the FDIC for purposes of evaluating the overall sufficiency of Ginnie Mae requirements and the resulting impact on the safety and soundness of the Ginnie Mae program.
- (e) Transformation Initiatives Support
- Provide support of Ginnie Mae's transformation initiatives such as NextGen to include but not limited to design thinking, development of business transformation framework, business integration planning and analysis, program and project management support, and strategic planning.

C.4.11 TASK ELEVEN – STATEMENT ON STANDARDS FOR ATTESTATION ENGAGEMENTS (SSAE) 18 TYPE II SOC 1 & SOC 2 (SOC 2 OPTIONAL)

The Contractor must provide and be subject to a SSAE 18 issued under SSAE Type II Engagement, report on policies and procedures placed in operation and tests of operating effectiveness of controls or other applicable audit requirements.

- (a) The Contractor shall use a qualified independent audit firm to conduct the SSAE 18 work. The independent audit firm shall have experience in performing similar audits.
- (b) The Contractor shall provide the auditor with access to all systems, information and people required to perform a SSAE 18 Type II with an American Institute of Certified Public Accountants (AICPA) SOC 1 and SOC 2 Type II review.
- (c) Annually, Ginnie Mae and the Contractor must agree on the scope and timing for the SOC 1 and SOC 2 audits before they are executed. This scope may include, but shall not be limited to, services, business processes, information systems, control objectives and controls.
- (d) For SOC 1, this report must be conducted every year of the TO term. A draft of the SSAE 18 report for SOC 1 will be submitted to Ginnie Mae by August 15th of the year ordered and the final report shall be delivered August 30th. Additionally, the report shall be conducted if there are major organization or system changes that occur and substantively alter the service provider's operating environment.
- (e) For SOC 2 (optional), this report must be conducted by issuance of a separate modification under this TO when the date, scope and periods of the test can be determined.
- (f) The Contractor must provide the SSAE 18 auditor with corrective action plans for addressing any findings noted for both SOC 1 and SOC 2. All significant deficiencies known as misstatements must be remediated in a timely manner with Remediation Status Progress Reports provided to Ginnie Mae quarterly as noted below in number (3) and (4).
- (g) Ginnie Mae, GSA and HUD's OIG must have access to all work papers related to the SSAE 18 audit.

The Contractor must:

- (1) Conduct a SOC 1, Type II report as a Contractor which provides services to Ginnie Mae that are relevant to Internal Controls over Financial Reporting (ICFR).
- (2) Conduct a SOC 2, Type II report as a Contractor which provides services to Ginnie Mae that are relevant to security, availability, processing integrity, confidentiality, and privacy.
- (3) Provide a draft SSAE 18 report for SOC 1 including a corrective action plan to the Ginnie Mae COR and TPOC by August 15th of the year ordered and a final report by August

30th of each year. The report shall also include a corrective action plan for all items requiring remediation. The Contractor shall provide Ginnie Mae a quarterly Remediation Status Progress Report including remediation actions taken and remaining actions required to address all open remediation items.

- (4) Provide a draft and final SSAE 18 report for SOC 2 including a corrective action plan to the Ginnie Mae COR and TPOC when due dates, scope and periods of the test can be determined. This work will be established by issuance of a separate modification under this TO. The report shall also include a corrective action plan for all items requiring remediation. The Contractor shall provide Ginnie Mae a quarterly Remediation Status Progress Report including remediation actions taken and remaining actions required to address all open remediation items.
- (5) Any restrictive legends for the use of the SOC 1 and SOC 2 reports shall be approved by Ginnie Mae.
- (6) The HUD Inspector General, Ginnie Mae's auditors or the GSA CO/COR or his/her designee shall have express access to the work papers of the independent public accounting firm preparing the SSAE 18 during and after completion of this task.
- (7) Conduct both the SOC 1 and SOC 2 report in accordance with SSAE 18, the AICPA "attest" standard and Ginnie Mae's guidance on scope.
- (8) The Contractor's subservice organizations, which support the contract and help to provide the overall contract solution, shall also provide Ginnie Mae with the appropriate SOC reports as applicable.
- (9) If the SOC reports provided to Ginnie Mae do not satisfy Ginnie Mae's requirements or if the reports are not delivered to Ginnie Mae, Ginnie Mae may take the following types of recourse:
 - (i) Ginnie Mae may conduct its own audits of the service organization and subservice organizations.
 - (ii) If Ginnie Mae conducts its own audits, the Contractor must establish service organization and subservice organization(s) agreement to provide necessary support to Ginnie Mae's auditors, to include providing required access to facilities, people, and records.
 - (iii) Ginnie Mae may invoice the service organization for the cost of the SOC report(s) or deduct such costs from future service organization invoices.

C.5 SECTION 508 COMPLIANCE

Section 508 of the Rehabilitation Act requires Federal agencies to make their electronic and information technology accessible to people with disabilities. This applies to all Federal agencies when they develop, procure, maintain, or use electronic and information technology.

All electronic and information technology (EIT) procured through this task order must meet the applicable accessibility standards specified in 36 CFR1194.2 unless an agency exception to this requirement exists. Any agency exceptions applicable to this task order are listed below.

The standards define Electronic and Information Technology, in part, as “any equipment or interconnected system or subsystem of equipment that is used in the creation, conversion, or duplication of data or information.” The standards define the type of technology covered and set forth provisions that establish a minimum level of accessibility. The application section of the standards (1194.2) outlines the scope and coverage of the standards. The standards cover the full range of electronic and information technologies in the Federal sector, including those used for communication, duplication, computing, storage, presentation, control, transport, and production. This includes computers, software, networks, peripherals, and other types of electronic office equipment.

Applicable Standards, which apply to this acquisition:

Section 1194.21: Software Applications and Operating Systems	Yes
Section 1194.22: Web-based Internet Information and Applications	Yes
Section 1194.23: Telecommunications Products	Yes
Section 1194.25: Self-Contained, Closed Products	N/A
Section 1194.26: Desktop and Portable Computers	Yes
Section 1194.31: Functional Performance Criteria	Yes

C.6 OTHER DIRECT COSTS (ODCs) & TRAVEL

Other Direct Costs (ODC's) when approved by the Government and incurred by the Contractor, in performance of tasks associated with this TO will be reimbursed directly by the Government. The Contractor shall obtain prior written approval from the TPOC for all ODC purchases. ODC's include, but are not limited to travel, materials infrastructure maintenance costs, supplies, printing/binding/shipping, etc. Only actual costs for ODCs that are supported with sufficient detail for the Government to verify that costs are reasonable and in performance of tasks will be reimbursed.

(a) Other Direct Costs (for Licenses & Data Subscriptions)

Ginnie Mae requires the Contractor to obtain or discontinue software licenses, data subscriptions and other services on behalf of Ginnie Mae. These services shall be reimbursed

at cost with no profit or fee. Any license must be transferable to Ginnie Mae upon request. These could include but are not limited to the following:

- (1) MARI Subscription
- (2) MERSCorp
- (3) AllRegs
- (4) Webex

(b) Travel

The Contractor will be required to perform periodic travel within the Continental United States (CONUS) and Puerto Rico in furtherance of MBSOA services. Contractor travel may be used to support Conferences and Training or for other purposes. Prior to travel (each planned trip), the Contractor must coordinate with and receive Government authorization, in writing, from the TPOC. All travel costs associated with the performance of services set forth in this TO will be reimbursed in accordance with the Federal Travel Regulation (FTR), if specifically authorized. The Contractor is responsible for obtaining all passenger, transportation, lodging and subsistence. Cost incurred for transportation and per diem (lodging, meals, and incidental expenses) must be billed in accordance with regulatory implementation of FAR 31.205-46, Travel Costs. The Contractor will not be reimbursed for local travel. Local travel is defined as travel within a 50 mile radius of the Contractor's facility.